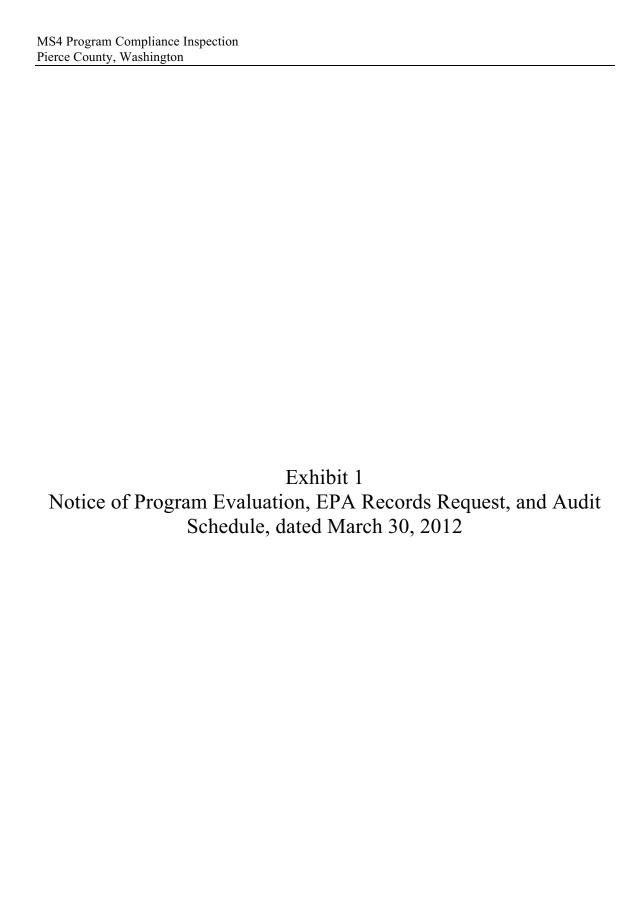
Appendix D Exhibit Log





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10

1200 Sixth Avenue, Suite 900 Seattle, Washington 98101-3140

APR - 2 2012

OFFICE OF COMPLIANCE AND ENFORCEMENT

Reply to OCE-133

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Dan Wrye Water Quality Manager Pierce County 2702 South 42nd Street Tacoma, Washington 98409-7322

Re:

Pierce County, Washington (hereinafter, Pierce County)

Municipal Separate Storm Sewer System

Notice of Program Evaluation/Inspection and Information Request

NPDES Permit Number: WAR04-4002

Dear Mr. Wrye:

The purpose of this letter is to provide you with formal notification that the U.S. Environmental Protection Agency, Region 10 (EPA), will be conducting a focused evaluation and inspection of your Phase I Municipal Separate Storm Sewer System (MS4) program. Representatives from EPA, the State of Washington Department of Ecology (Ecology), and PG Environmental, LLC (PG), a contractor for the EPA, will be present. The program evaluation will be performed pursuant to 40 C.F.R. §122.41(i) and your National Pollutant Discharge Elimination System (NPDES) Permit Number WAR04-4002. The goal of the program evaluation is to determine your overall success and effectiveness in meeting the conditions and requirements contained within the permit.

We have scheduled the inspection for Tuesday, May 15, 2012, through Wednesday, May 16, 2012. We would like to start at 8:00 a.m. at the Pierce County offices on Tuesday, May 15, 2012. Pierce County is asked to provide a suitable location where EPA, Ecology, PG, Pierce County, and other appropriate MS4 permittee staff can meet on Tuesday, May 15, 2012, through Wednesday, May 16, 2012. The program evaluation will consist of interviews with the MS4 permittee staff members, file reviews, and inspections of Pierce County operations.

We plan to review the stormwater program procedures and practices of Pierce County and will need appropriate personnel knowledgeable about these specific program areas to be available. Therefore, in an effort to minimize disturbances to staff and ensure that proper personnel (including inspectors) are available, we have prepared a program evaluation agenda for each day (also see electronic file/table attached to email transmittal). The draft agenda serves to schedule this evaluation and to help you identify the appropriate person(s) who should be present during the office and in-field review. We can make small adjustments to this itinerary to meet schedule conflicts if necessary. In addition, we intend

to hold a conference call with you in the weeks preceding the inspection to discuss logistics. Upon conclusion of the program inspection, we will provide an exit interview, during which we can discuss the preliminary findings. All findings will remain preliminary until the delivery of a detailed evaluation report.

To assist with the MS4 evaluation, EPA is requesting the information listed in the attached spreadsheet (see also electronic file/spreadsheet attached to email transmittal). The spreadsheet is intended to be filled-out electronically. EPA is requesting this information pursuant to Section 308 of the Clean Water Act (CWA), 33 U.S.C. §1318.

For the most part, EPA requests that the information be provided during the applicable program element discussions scheduled for Tuesday, May 15, 2012. However, Item Nos. 1-4, 20, 30, and 39, which are highlighted in red, must be submitted to the contacts listed below by May 4, 2012, as these are needed to help us understand what can be accomplished during our field exercises. Please provide the completed spreadsheet via e-mail and Item Nos. 1-4, 20, 30, and 39 of the information request via mail or e-mail by May 4, 2012. Note the deadline for your response is intended to allow us some time to review the information that you submit before the inspection takes place. Wherever you are unable to provide a response in the required timeframe, please note that fact in your response. Please be aware that your lack of a response may necessitate a more in-depth investigation of the applicable portions of your stormwater management program. If some of the documents requested are extremely large and not available in electronic format, please have those documents available on-site for review, and indicate which documents you will have available on-site.

Please be aware that some of the items in the attached spreadsheet may not be applicable to the way your particular program is structured. If that is the case, please provide an explanation in the comments field of the spreadsheet and we can discuss in more detail during the inspection. EPA will likely request additional/specific documents during the inspection as we become aware of them (note that the records request contains place holders for anticipated items). A copy of the response should be mailed to both:

Julie Congdon
US EPA, Region 10
1200 6th Avenue, Suite 900, OCE-133
Seattle, WA 98101
congdon.julie@epa.gov

and

Scott Coulson
US EPA Contractor
PG Environmental, LLC
607 10th Street, Suite 307
Golden, CO 80401
scott.coulson@pgenv.com

Failure to provide all the requested information or to adequately explain the basis for such failure, or to make any false material statement or representation in response to this Information Request constitutes a violation of the Section 308 of the CWA. A violation of Section 308 of the CWA may result in an



enforcement action and the imposition of civil and/or criminal penalties or fines as provided under Section 309 of the CWA, 33 U.S.C. §1319, and Title 18 of the United States Code, 18 U.S.C. §1001.

Although the information requested may be submitted to EPA, you are entitled to assert a business confidentiality claim under 40 C.F.R. Part 2, Subpart B. If EPA determines your business confidentiality claim meets the criteria under 40 C.F.R. § 2.208, the information will be disclosed only to the extent described under 40 C.F.R. Part 2, Subpart B. Unless a confidentiality claim is asserted at the time the requested information is submitted, EPA may make the information available to the public without further notice to you.

We look forward to your cooperation with this matter. If you have questions about this inspection, please contact Julie Congdon, Compliance Officer, at (206) 553-2752.

We thank you in advance for your cooperation.

Sincerely.

Edward J. Kowalski

Director

Enclosures

cc by email: Vinc

Vince McGowan

Washington Department of Ecology

Kathleen Emmett

Washington Department of Ecology

Tentative Agenda for MS4 Program Inspection Pierce County, Washington May 15—May 16, 2012

Day	Time	Team 1 Program/Agenda Item	Team 2 Program/Agenda Item
Tuesday, May 15,	8:00 am - 9:00 am	Kick-off Meeting & Program	m Management Overview (Office)
2012	9:00 am - 10:30 am		Discharges Detection and Elimination C.8 in Phase 1 Permit
	10:30 am - 12:00 pm		Program (S5.C.9 in Phase 1 Permit) istics for Thursday afternoon (Office)
	12:00 pm - 1:30 pm		ssion among the EPA Inspection Team nembers
	1:30 pm - 3:00 pm		Controlling Runoff from Construction Sites (Office)— S5.C.5 in Phase 1 Permit (in part)
	3:00 pm - 4:00 pm	Operation and Maintenance Program (Field)	Controlling Runoff From New Development and Redevelopment and Structural Stormwater Controls (Office)— S5.C.5 (in part) and S5.C.6 in Phase 1 Permit
	4:00 pm - 4:30 pm	Recap and Logistic	s Planning for Wednesday
Wednesday, May 16,	8:00 am - 9:00 am	Illicit Discharge Detection and	Controlling Runoff from Construction
2012	9:00 am - 12:00 pm	Elimination (Field)	Sites (Field)
	12:00 pm - 1:00 pm	Lu	nch Break
	1:00 pm - 3:00 pm	Open Period for Additions	al Activities (Tentative time slot)
	3:00 pm - 3:30 pm	Interna	al Discussion ²
:	3:30 pm - 4:30 pm	Closing Conferen	nce ³ (Tentative time slot)

¹ Open Period for Additional Activities - Will be decided by the EPA Inspection Team during the inspection activity in collaboration with County staff. ² Internal Discussion - Time for inspectors to arrange notes and prepare information to be discussed with the County at the Closing Conference. County participation is not expected.

The County is encouraged to invite representatives from all applicable organizational divisions/departments.

Page 1 of 3

EPA MS4 PROGRAM COMPLIANCE INSPECTION - Pierce County, Washington May 17-18, 2012 Pre Audit Questionnaire and Records Request

Program	Program Management/Kick-off Meeting					
Item No	io. Document(s)/Data Requested	Document/Data Provided (please select Yes/No)	Formal Title(s) of Document(s) Provided and Date/Version	Department Responsible for Document(s)	Web Link to Document(s) Provided (Yes/No; please provide web address information)	Data Entry/Additional Information Regarding Requested Item (Comments/Notes)
-	Stormwater Management Program (SWMP) Plan (Version currently operating under)					
2	MS4 Annual Report (most recent Reporting Year) Program organizational chart and/or a description of					
ε	the departments and personnel involved in the implementation of your MS4 program and their responsibilities					
4	Map of the permitted area and receiving waters, basins, and segments, including any TMDL or 303(d) listed waters					
S	Any formal agreements with other entities or local governments for implementation of your MS4 programs (e.g., memoranda of understanding)					
9	MS4 Annual Expenditure (most recent Fiscal Year)					
L 0	MS4 Budget (most recent Fiscal Year)					
× 0	Primary MS4 Funding Source Number of Major MS4 Outfalls (Indicate Estimated or Measured)					
Illicit Co	Illicit Connections and Illicit Discharges Detection and Elimination	ıation				
Please P	Please Provide a Description of the Departments/Divisions Involved in Program Element and Brief Description	volved in Program Element	and Brief Description of Responsibilities:			
Item No.	io. Document(s) Requested	Document Provided (please select Yes/No)	Formal Title(s) of Document(s) Provided and Date/Version	Department Responsible for Document(s)	Web Link to Document(s) Provided (Yes/No; please provide web address information)	Additional Information Regarding Requested Item (Comments/Notes)
10	Ordinance(s) or regulatory mechanism(s) prohibiting non-stormwater discharges to the MS4					
Ξ	Procedures for reporting and correcting or removing illicit discharges/connections/spills					
12	Procedures for addressing pollutants entering the MS4 from an interconnected, adjoining MS4					
13	Inventory of reported incidents of illicit discharges/connections/spills and resolution (most recent Reporting Year)					
14	Employee/maintenance personnel training plan/program, records and syllabus pertaining to IDDE (most recent Reporting Year)					
15	At time of audit, provide onsite demonstration of storm drain system mapping tools. Emphasize layers/mapping that informs the MS4 program activities (e.g., storm drain system, structural courtots, outfals, receiving waters, municipality connection points, etc.)					
16	Priority list of conveyances and outfalls in the storm drain system (most recent Reporting Year)					
17	Documentation of Outfall Reconnaissance Inventory including records of outfall inspections/dry weather field screening and monitroining (most recent Reporting Year)					
18	Example/case file of an illicit discharge incident where enforcement was used (ideally full extent of enforcement authority)					

Page 3 of 3

Exhibit 2 Pierce County Response Inventory Submitted May 4, 2012

Page 1 of 4

EPA MS4 PROGRAM COMPLIANCE INSPECTION - Pierce County, Washington May 15-16, 2012 Pre Audit Questionnaire and Records Request

Prog	gram Ma	Program Management/Kick-off Meeting					
Iteı	Item No.	Document(s)/Data Requested	Document/Data Provided (please select Yes/No)	Formal Title(s) of Document(s) Provided and Date/Version	Department Responsible for Document(s)	Web Link to Document(s) Provided (Yes/No; please provide web address information)	Data Entry/Additional Information Regarding Requested Item (Comments/Notes)
	-	Stormwater Management Program (SWMP) Plan (Version currently operating under)	Yes	2012 Stormwater Management Plan	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
	2	MS4 Annual Report (most recent Reporting Year)	Yes	2011 NPDES Annual Report	y Surface Water	https://filelocker.ad.co.pierce.wa.us	
	3 11	Program organizational chart and/or a description of the departments and personnel involved in the implementation of your MS4 program and their responsibilities	Yes	Public Works and Utilites Org Chart. Planning and Pierce County Surface Water Land Services, Development Engineering org chart. Management PC SWPPP Facility PPT Roster	/ Surface Water	https://filelocker.ad.co.pierce.wa.us	
	4	Map of the permitted area and receiving waters, basins, and segments, including any TMDL or 303(d) listed waters	Yes	TMDL/303 Map	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
	5 89 P	Any formal agreements with other entities or local governments for implementation of your MS4 programs (e.g., memoranda of understanding)	Yes	Memorandum of Understanding w/ cities and towns Pierce County Surface Water in PC, 2010 ILA w/ Pierce Conservation District Management		http://www.co.pierce.wa.us/pc/services/home/ environ/water/wqws/mous.htm	
	9	MS4 Annual Expenditure (most recent Fiscal Year)	Yes	2008 Workload analysis and 2010 Update, Staff Itacking Matrix	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
	7 N	MS4 Budget (most recent Fiscal Year)	Yes	1 2013 Budget Request, Pierce County Cost of Compliance Report, 2012 PW&U Budget,SWM 1 2012-2017 CIP	Pierce County Budget and Finance, Pierce County Surface Water Management, Pierce County Public Works and Utilities Department	https://filelocker.ad.co.pierce.wa.us	
	8 I	Primary MS4 Funding Source	Yes	72 % of Budget is Fees, PP Excerpt	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
	9 6	Number of Major MS4 Outfalls (Indicate Estimated or Measured)	Yes	SWM Channel Outfalls, SWM Pipe Outfalls	Pierce County Surface Water Management	1160 known measured outfalls. 804 are piped 356 are channels.	24" or equivalent
	it Conne	Micit Connections and Micit Discharges Detection and Elimination	ation				

Please Provide a Description of the Departments/Divisions Involved in Program Element and Brief Description of Responsibilities: Surface Water Management WQ and Watersheds section - Respond to complaints of illicit discharges and conduct dry weather screening.

Item No.	Document(s) Requested	Document Provided (please select Yes/No)	Formal Title(s) of Document(s) Provided and Date/Version	Department Responsible for Document(s)	Web Link to Document(s) Provided (Yes/No; please provide web address information)	Additional Information Regarding Requested Item (Comments/Notes)
10	Ordinance(s) or regulatory mechanism(s) prohibiting non-stormwater discharges to the MS4	Yes	Pierce County Code 11.05	Pierce County Surface Water Management	http://www.co.pierce.wa.us/xml/Abtus/ourorg/council/code/title%2011%20pcc.pdf	
11	Procedures for reporting and correcting or removing illicit discharges/connections/spills	Yes	Pierce County Surface Water Management Policies Pierce County Surface Water POL-2011-002 and POL-2011-002A and SWM Management Spill Response Form 06/11	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
12	Procedures for addressing pollutants entering the MS4 from an interconnected, adjoining MS4	Yes	Memorandum of Understanding w/ cities and towns Pierce County Surface Water in PC	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
13	Inventory of reported incidents of illicit discharges/connections/spills and resolution (most recent Reporting Year)	Yes	2011 Service Response System (SRS) records, 2011 Pierce County Surface Water Request for Assistance RFA records Management	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	RFA system implemented 8/2012
14	Employee/maintenance personnel training plan/program, records and syllabus pertaining to IDDE (most recent Reporting Year)	Yes	2011 IDDE General Awareness Training, 2011.07.11 SWM Spill Response Policy and Procedure; 2011.01.19 EPA IDDE 302 Webeast, 2010 IDDE General Awareness Training; 2008 IDDE Training 2010 NPDES Training Summaries; PC Road Operations Prollution Prevention & O&M.: PWU NPDES Training Summaries; 2011 Road Ops BMP Training; 2011 Road Ops BMP Training; 2011 Road Ops BMP	PC Surface Water Management; PC Road Operations	PC Surface Water Management; https://filelocker.ad.co.pierce.wa.us	

Pierce County Surface Water https://filelocker.ad.co.pierce.wa.us On site demonstration of mapping tools.	inventory of conveyances and outfalls 24 inch and Prierce County Surface Water https://filelocker.ad.co.pierce.wa.us Management	Pierce County Surface Water https://filelocker.ad.co.pierce.wa.us	ment case (2 files) Pierce County Surface Water https://filelocker.ad.co.pierce.wa.us	piuls Response Policy, Response Policy, Interim Pierce County Surface Water https://filelocker.ad.co.pierce.wa.us Volicy, Source Control Management
Pierce Mana	Inventory of conveyances and outfalls 24 inch and Pierce greater with maps.	Pierce Manasheets Mana	Exampe of IDDE Enforcement case (2 files) Mana	Response Policy, 9 Quality Inspection nance Standards F
Yes	Yes Invent	Yes 2011 (Yes Exam	IDDE Water v
At time of audit, provide onsite demonstration of storm drain system mapping tools. Emphasize layers/mapping that informs the MS4 program activities (e.g., storm drain system, structural controls, outfalls, receiving waters, municipality connection points, etc.)	Priority list of conveyances and outfalls in the storm drain system (most recent Reporting Year)	Documentation of Outfall Reconnaissance inventory including records of outfall inspections/dry weather field screening and monitoring (most recent Reporting Year)	Example/case file of an illicit discharge incident where enforcement was used (ideally full extent of enforcement authority)	Any other standard operating procedures used by the County to support this SWMP component
15	16	17	18	61

Operation and Maintenance

Please Provide a Description of the Departments/Divisions Involved in Program Element and Brief Description of Responsibilities:

Public Works and Utilities, Surface Water Management Division, Water Quality and Watersheds Manager - Responsible for custodial departments and utilities, Surface Water Management, SWM Maintenance Manager. Responsible for maintenance of regional and off right of way ponds and river levies and the Pierce County Quarry. Public Works and Utilities, Surface Water Management, SWM Maintenance of regional and off right of way ponds and river levies and the Pierce County Quarry. Public Works and Utilities, Transportation Services Division, Roads Maintenance Manager - Responsible for maintenance of Roads Operations facilities within the roads right of way and at County Road shops and Pits. Other departments (I.E. Parks, Facilities Management, Solid Waste, Sewers) responsible for maintenance at their facilities.

Ifem No.	Document(s) Requested	Document Provided (please	Formal Title(s)	Department Responsible for	Web Link to Document(s) Provided	Additional Information Regarding Requested Item
		select Yes/No)	Date/Version	Document(s)	(Yes/No; please provide web address information)	(Comments/Notes)
20	Map/inventory of the County facilities and properties within the permitted area (e.g., road maintenance facilities, stockpile sites, storage and material handling areas, etc.)	Yes	Excel Spreadsheet facilities and Maps showing the Pierce County Surface Water same.	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
21	Example Facility Stormwater Pollution Prevention Plan (SWPPP) document—EPA Audit Team may select additional sites at the time of the audit	Yes	SWPPP: Spanaway Lake Park (April 2010)	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
22	List of all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the County that are covered under the MS4 Permit.	Yes	List of sites w/ SWPPP's	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
23	Documentation of policies and procedures to reduce pollutants on Permittee owned lands including: parks, open space, road right-of-ways, maintenance yards, and stormwater treatment and flow controls.	Yes	Plerce County Stormwater & Site Development Manual 2008:Vol 4; Manual 2008:Vol 4; Guidelines; Utilities in Pierce County Right-of-Way; Pierce County Stormwater Maintenance Manual for Private Facilities (Revised 2009)	Pierce County Surface Water Management, "Pierce County Road Maniterance Operations; - Pierce County Project Engineering; -	Regional Road Maintenance ESA Program Guidelines http://www.co.pierce.wa.us/xml/abtus/ourorg/ pwu/roadops/ESA_Manual/intro.pdf	
24	Maintenance Standards developed for stormwater facilities (e.g., catch basins, permanent treatment and flow controls)	Yes	Private Facility Maintenance Manual, Executive Summary of Road Ops maintneance practices	Pierce County Surface Water Management; Pierce County Road Maintenance Operations;	https://filelocker.ad.co.pierce.wa.us	
25	Records of inspections and maintenance of County facilities including: pipes and culverts, catch basins, inlets, and ditches (Examples from current Permit term)	Yes	es 1	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
26	O & M employee training plan/program, records, and syllabus pertaining to pollution prevention/good housekeeping (most recent Reporting Year)	Yes		Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
7.7	Any other standard operating procedures used by the County to support this SWMP component	Yes	Water Quality Inspection Response Policy, Interim Maintenance Standards, Facilities Assessment Procedures, Source Control Policy, Spill Response Policy and Procedures, IDDE Response Policy	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	

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Item No.	No. Document(s) Requested	Document Provided (please select Yes/No)	: Formal Title(s) of Document(s) Provided and Date/Version	Department Responsible for Document(s)	Web Link to Document(s) Provided (Yes/No; please provide web address information)	Additional Information Regarding Requested Item (Comments/Notes)
78	All construction-related ordinance(s) or regulatory mechanism(s) pertaining to erosion, sediment, and waste control	Yes	PCC Title 11, 17a, 18e. 2000 Solid Waste Management Plan w/ 2008 update	Pierce County Surface Water Management, Pierce County Planning and Lands Services, Tacoma-Pierce County Health Department	https://filelocker.ad.co.pierce.wa.us	
29	Construction BMP Manual	Yes	Pierce County 2008 Stormwater Management and Site Development Manual	Pierce County Surface Water Management	https://filelockerad.co.pierce.wa.us	
30	Map/inventory of current active construction sites in the permitted area showing location (differentiating County sponsored from private projects)	Yes	Public Construction Sites Maps and spreadsheet, Private Construction Sites Maps and spreadsheet	Pierce County Surface Water Management, Pierce County Planning and Lands Services	https://filelocker.ad.co.pierce.wa.us	
31	Documentation showing process of permits, plan review, inspections, and enforcement capability	Yes	Single Family Site Development Inspection Process, ESC Lead Report Form, General Preconstruction Mtg. Notes, General Preliminary Site Inspection Report Form, General Site Development Inspection Process, Residential Preliminary Site Inspection Process, Residential Preliminary Site Inspection Report Form, Geocethnical Hazard Letter Checklist, Abbreviated Plan Review Checklist, Drainage and Erosion Comrol Plan Review Checklist, Cherral Review Checklist, Landslide Hazard Area Evaluation Review Checklist, Shoreline Hazard Evaluation Review Checklist, Shoreline Hazard Evaluation Review Checklist, PCC Title 17A and 18	Pierce County Planning and Lands Services	https://filelocker.ad.co.pierce.wa.us	
32	Construction inspection records (most recent Reporting Year)—EPA Audit Team will select specific sites at the time of the audit	Yes	Construction Inspection Response Letter, Inspection Workload Reports, Actively Permitted Private Development Pojects	Pierce County Planning and Lands Services	https://filelocker.ad.co.pierce.wa.us	
33	3 Non-Compliance Enforcement Strategy	Yes	DE POL 5200 Enforcement Strategy for Permitted Projects, DE POL 6001 Enforcement on Unpermitted Sites, SWM Source Control Policy, SWM Spill Response Policy and Procedures, SWM WQ IDDE Response Policy	Pierce County Planning and Lands Services, Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
34	Example/case file of a construction site issue where enforcement of regulatory mechanism was used (ideally full extent of enforcement authority)	Yes	618086 Enforcement on Permitted SF Site-Permit Cancelled, NINC Recorded, 677660 Typical Enforcement on a Permitted Single Family Site with RFR, 701945 Typical Enforcement Action on Permitted General Site, 712076 Typical Enforcement Action on Permitted Single Family Site, Actual Enforcement Case Sample	Pierce County Planning and Lands Services	https://filelocker.ad.co.pierce.wa.us	
35	Documentation of education / training for County staff who conduct plan reviews, inspections, etc.	Yes	Stormwater Manual Reviewer Training 2010.10.21/Stormwater Manual Industry Training 2010.10.28	Pierce County Surface Water Management	https://filelockerad.co.pierce.wa.us	
36	Any other standard operating procedures used by the County to support this SWMP component					
Confr	Controlling Runoff From New Development and Redevelopment (Structures Stormwester Controls	ment / Structural Stormwater	Controls			

Controlling Runoff From New Development and Redevelopment / Structural Stormwater Controls

Page 3 of 4

Page 4 of 4

Please Provide a Description of the Departments/Divisions Involved in Program Element and Brief Description of Responsibilities:
Public Works and Utilities, Surface Water Management Division-Develop Site Development Manual and erosion and sediment/stormwater control standards. Conduct post development inspections of private sommwater management facilities to insure proper long term operation and maintenance.
Planning and Lands Services, Development Engineering-provide review and inspection of the site work (grading, filling, clearing, road building, storm drainage & site stabilization) associated with land development Engineering-provide review and inspection of the site work (grading, filling, clearing, road building, storm drainage & site stabilization) associated with land development Engineering-provide review and inspection of the site work (grading, filling, clearing, road building, storm drainage & site stabilization) associated with land development projects in Pierce County.

37 regustors at the story at th		select Yes/No)	Date/Version	Document(s)	(Yes/No; please provide web address information)	(Comments/Notes)
	All post-construction related ordinance(s) or regulatory mechanism(s) pertaining to permanent stormwater treatment and flow control facilities for new development and re-development projects	Yes		Pierce County Surface Water Management	http://www.co.pierce.wa.us/xml/Abtus/ourorg/council/co http://www.co.pierce.wa.us/xml/Abtus/ourorg/council/co http://www.co.pierce.wa.us/xml/Abtus/ourorg/council/co de/title%2017a%20pcc.pdf	
MG	Design manual for post-construction control	Yes	Pierce County 2008 Stormwater Management and Site Development Manual	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
39 mar juri fron	Map/inventory of post-construction stormwater management practices within the County's jurisdiction (differentiating County owned/operated from private)	Yes	Map and Inventory of Private Stormwater Management Facilities Map and Inventory of Public Stormwater Management Facilities	Pierce County Surface Water Management	htps://filelocker.ad.co.pierce.wa.us	
Insp trea 40 priv Rep	Inspection schedule for permanent stormwater treatment and flow controls inspections, both private and Permittee owned (most recent Reporting Year)	Yes	2011 Inspections Scheduled	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
Recor 41 for po practi Year)	Records of inspection and maintenance activities for post-construction stomwater management practices (Examples from most recent Reporting Year)	Yes	Public Facility Inspection Record, Private Facility Inspection Record	Pierce County Surface Water Management	htps://filelocker.ad.co.pierce.wa.us	
Proj	Progressive enforcement policy requiring sites to come into compliance	Yes	SWM IDDE Response Policy, SWM POL 2009- 002 Wate Quality Inspection Response Policy, SWM POL 2011-001 Interim Maintenance Standards, SWM Source Control Policy	Pierce County Surface Water Management	htps://filelocker.ad.co.pierce.wa.us	
Doc 43 con prac	Documentation of training for Permittee staff that conduct post-construction stormwater management practice inspections	Yes	SWM Inspectors training transcripts;	Pierce County Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
44 List	List of planned individual projects scheduled for implementation during the term of this permit	Yes	2012-2017 CFP	Pierce County Surface Water Management	Link to Capital Facilites projects archive http://www.co.pierce.wa.us/pc/services/home/environ/w ater/cip/archives.htm	
Des 45 and Proj	Description of the prioritization process, procedures and criteria used to select Structural Control Projects	Yes	Appendix 1 Guidance for Project Prioritization	Pierce County Surface Water Management	Link to Basin Planning webpage http://www.co.pierce.wa.us/pc/services/home/environ/w ater/ps/basinplans/bpmain.htm	
46 Any	Any other standard operating procedures used by the County to support this SWMP component					
In Addition to	the Numbered Items Requested Above: Provide	le Any Other Documents or T	In Addition to the Numbered Items Requested Above: Provide Any Other Documents or Tools You Believe Demonstrate Program Development and Structure	ent and Structure.		
Item No.	Formal Title of L	Formal Title of Document Provided (including Date/Version)	ng Date/Version)	Department Responsible for Document	Web Link to Document Provided	Additional Information Regarding Document Provided (Comments/Notes)
47	Stormwater	Stormwater Manual Industry Training 2010.10.28		Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
8 4 4	10.00	Industry Training 2012.02.29 2010 Water Quality Report Card		Surface Water Management Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
50		Homeowners Workshops		Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
51	Res	Response to Administrative Order		Surface Water Management	https://filelocker.ad.co.pierce.wa.us	
53	Respon	Raise the Grade Fact Sheet		Surface Water Management	https://filelocker.ad.co.pierce.wa.us https://filelocker.ad.co.pierce.wa.us	
54	2	2011 Compliance Rate Report		Surface Water Management	https://filelocker.ad.co.pierce.wa.us	

Exhibit 3 Cost of Compliance Analysis for the Draft 2013-2017 NPDES Municipal Stormwater Permit, Phase I Report, Pierce County, dated May 2012

Phase One Report

Cost of Compliance Analysis for the Draft 2013 - 2017 NPDES Municipal Stormwater Permit

Pierce County

May 2012



Phase One Report

Cost of Compliance Analysis for the Draft 2013 - 2017 NPDES Municipal Stormwater Permit

Pierce County

May 2012



This report has been prepared for the use of the client for the specific purposes identified in the report. The conclusions, observations and recommendations contained herein attributed to SAIC constitute the opinions of SAIC. To the extent that statements, information and opinions provided by the client or others have been used in the preparation of this report, SAIC has relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. SAIC makes no certification and gives no assurances except as explicitly set forth in this report.

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Appendix A 2013 COST OF COMPLIANCE



Appendix A cost of Complete Washington State 2013 NPDES Phase I Municipal Stormwater Pernit Processing Comments of Complete Cost of Cost of Cost of Cost

Pierce County			
4/40/2042			

4/10/2012															Cost by Deg	artment	
Description of Work				Data						Cost by Year					SWM	PALS	
Permit Task Section	it NPDES on Function	Number Type of of Action or Actions Units	sof n or Hoursper Costper ts Action Hour(1)		One time or Job Class Timited time costs	Annual Contracted Services and Equipment ts Purchases		2013 2014	14 2015	5 2016	2017	Total Cost Total FTE 2013-2017	Average Annual Cost 2013-2017	New FTE Job Count Class	Total Costs 2013 to 2017	New FTE New FTE Total 2013 to Count Job Class 2017 Costs	Comments
S1. Permit Coverage and Permittees General Permit Coordination with new Secondary Permittees S1.E.	Permit	1 Coordination	80	\$55 PM-SWM WQ3		2	lew FTE	0.05				900		0.05 WQ3			Ongoing activity during Permit Cycle
	Management				62	- s	S S	4,375 \$	4,375 \$	4,375 \$ 4	4,375 \$ 4,375	75 \$ 21,873	73 \$ 4,375		\$ 21,873	3	
Flood Control District NOI S1.E.1.a	Permit Management	1 Reporting	40	\$55 PM-SWM P2		_ 0	New FTE 0 Direct Cost \$	2,187 \$	-0.02	69	97	0.00	87 \$ 437	0.00 P2	\$ 2,187		\$13,000 is annual permit fee. 0.5 FTE for one year only to implement
					s	\$ 13,000 ln	Indirect Cost \$	13,000 \$	13,000 \$ 13	13,000 \$ 13	13,000 \$ 13,000	67	\$ 13		\$ 65,000		NOI.
S5. Stormwaler management Program Fully document SWMFP (SWMPR) S5.A.i	Reporting and Mapping	1 Reporting	40	\$55 PM-SWM WQ3			New FTE 0	0.02				0.02		0.02 WQ3			Additional element to existing and required annual report.
							Direct Cost \$ Indirect Cost \$	2,187 \$	2,187 \$	2,187 \$ 2	2,187 \$ 2,187	87 \$ 10,937	37 \$ 2,187		\$ 10,937		
S5.C2 System Mapping & Documentation LID BMPs mapped and within specific time period. S5.C2.a	Reporting and Mapping	52 Mapping	9	\$55 PM-SWM WQ3	67	99		0.29				3		0.29 WQ3			Orgaing activity during permit cycle. Turn around time for mapping increased.
Map comevanos to WOFC BMPs. S5C.2.b		1 Mapping	096	\$55 PM-SWM GIS		_ = Z	Direct Cost \$ Indirect Cost \$ New FTE 0	28,435 \$	28,435 \$ 28	28,435 \$ 28	28,435 \$ 28,435	35 \$ 142,177	77 \$ 28,435	0.54 GIS	\$ 142,177		Onsoing activity during permit cycle. Work completed by 811,2017.
	Mapping		3		es.		% % St	52,496 \$	52,496 \$ 57	52,496 \$ 52	52,496 \$ 52,496	s s	80 \$ 52,496		\$ 262,480		
S5. C4 Public Involvement & Participation Fosfer greater public involvement in SYMIP S5.C4.b	Public Outreach	1 Reporting	40	\$55 OE-SWM P2	67	67		0.02				0.02		0.02 P2			Ongoing activity during permit cycle.
	and Education					<u>ند ت</u>	Direct Cost \$ Indirect Cost \$	2,187 \$	2,187 \$	2,187 \$ 2	2,187 \$ 2,187	87 \$ 10,937	37 \$ 2,187		\$ 10,937		
Provide easily understandable & accessible information (such SS.C.4.b. as to public	Public Outreach and Education	1 Reporting	40	\$55 OE-SWM P2	en		es.	2,187 \$	2,187 \$	2,187 \$ 2	2,187 \$ 2,1	0.02	37 \$ 2,187	0.02 P2	\$ 10,937		Orgoing activity during permit cycle.
							Indirect Cost \$. 60	· es	· so	. 00	· so				
CS Controlling Kunoff from New Development & Construction Skies Ordinarces & manail update to meet Appoint it I	Controlling Construction Runoff	1 OrdnanceMa	1328	365 PM-SWM CE2	\$ 175,000.00		Now FTE 0	0.75		57.0-		000		0.00 GE2			Non labor is cost for consultant for updafing ordentros and manual. 1.0 FTE is passormed needed to manage ordinance and manual update. Cost based on past manual and ordinance update effort Updates due by 1.201/2014
						<u>ند ن</u>	Direct Cost \$ Indirect Cost \$	86,401 \$ 8 175,000 \$	86,400.75 \$	es es	en en	- \$ 172,8	172,802 \$ 34,560 175,000 \$ 35,000		\$ 172,802	200	
Code related compliance with LID requirements (beyond \$5.0.5.b. i-iii) Manual update)	Hii Controlling Construction Runoif	- Ordinanos/ Manual	nos/ -	PM-SWM	\$ 175,000.00		vew FTE	0				000					Non labor is cost for consultant for updating ordinance and manual. Updates due by 1/2/31/2014
						. I	Direct Cost \$ Indirect Cost \$. \$.	es es	es es	φ, φ, 	. \$.	. \$.		\$ 175,000		
Detailed stormwater basin plan for Clover, Mashel, or WSDOE - S5.C.5.c approved other	New Development	1 Plaming	884	\$62 PM-SWM P3	97	_ 0	69	0.50 54.828 S	54.828 \$	54828 \$ 54	. 54.828 \$	-0.5 0.00 - \$ 219.310	10 \$ 43.862	0.00 P3	\$ 219.310	,	Begin by 2/2/2014 and complete by 8/1/2016
SUSTAIN Modeler for basin rien	Maw	1 Plaming	888	S65 PM-SWM CF2	\$ 650000		76			,		,	,	0.00 052			Staff affort and modellons (fant nirchase in 2014
	Development		5				Direct Cost \$	s s s	57,601 \$ 650,000 \$	s s	87 87 	- \$ 57,601 - \$ 650,000	01 \$ 11,520 00 \$ 130,000		\$ 57,601	1	Court constitution inconstruction and in particular and in a
SS. CS Structural Stommwater Control Develops program with a range of project types SSC.6.s.	Structural Stormwater Control	1 Programmatic	280	962 SSWC-SWM WQ4	67	\$ 1,000,000,00 N	69	0.33	36.553 \$	36.593 \$ 36	36.593 \$ 36.593	0.33	85 38.593	0.33 WQ4	\$ 182,965		\$1M non bibor cost per year is the average cost county has been contributing to match grant program funds distincted by Ecology for Structural SW control upgades, retrolls and manterance.
Develop a planning process and implement the Structural SSC.6.b Sumwater Control Program	Structural Stormwater Control	1 Programmatic	069	\$62 SSWC-SWM WQ4	99		oo 0	0.33		· ·	· ·		S .	0.33 WQ4	io.		
Document projects based on templates in Appendix 11 as part . S5.C.6.c. of each armusi report	Shuctural	1 Programmatic	280	\$62 SSWC-SWM WQ4	65		Indrect Cost \$ New FTE 0	0.33	. 00	. 60	. 60	03	. 60	0.33 WQ4			
	Control					هد ب	Direct Cost \$ Indirect Cost \$	36,593 \$	36,593 \$ 36	36,593 \$ 36 - \$	36,593 \$ 36,593	93 \$ 182,965	55 \$ 36,593		\$ 182,965		
S5., C7 Source Control Program for Existing Development Enforcement at sites that have NPDES permit or state S5.C.7.a.iii washewster (inchan a nermit	ii Permit Management	20 Enforcements	40	\$55 PM-SWM WQ3	67		New FTE 0	0.45				0.45		0.45 WQ3			Estimate includes construction sites with NPDES permit
							Direct Cost \$ Indirect Cost \$	43,747 \$	43,747 \$ 43	43,747 \$ 43	43,747 \$ 43,747	s s	33 \$ 43,747		\$ 218,733		
Update source control related code SSC7.b.i	Source Control	1 Ordnanos Manual	25	\$55 SC-SWM WQ3		2 0.5	New FTE Direct Cost \$	67 67	97 97	62.60	0.50	40 \$ 48,340	40 \$ 9,668	0.50 WQ3	\$ 48,340		Code to be updated by 2-18-2018
Update inventory list for land uses and businesses (App 8) S5.C.7 bill	S5.C.7.bii.(1) Source Control	1 Reporting	40	\$45 SC-SWM WQ2	en		67	0.02	1,812 \$	1,812 \$ 1,	1,812 \$ 1,8	0.02	50 \$ 1,812	0.02 WO2	090'6 \$		
								es.	so.	s	es.	es.	65				

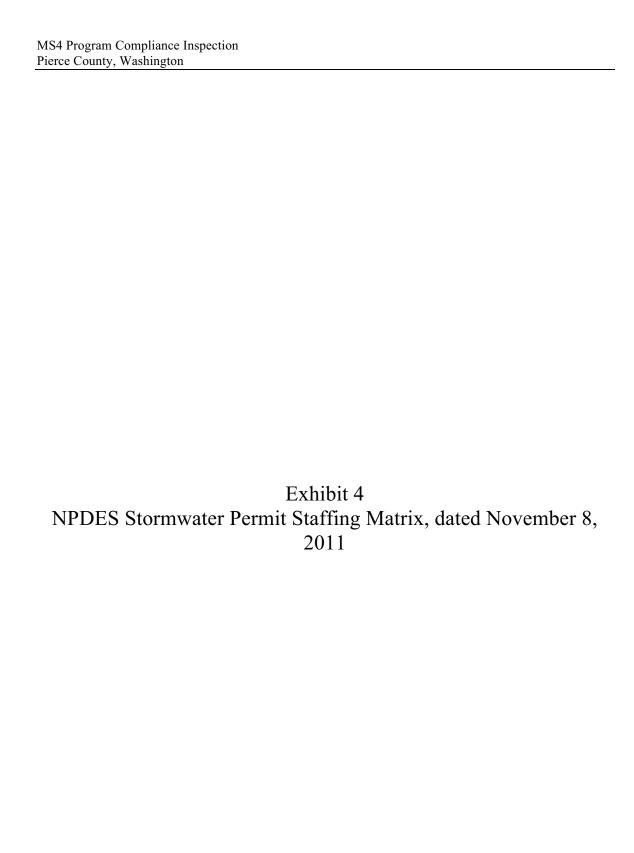
Appendix A Cossi of Compliance with the Washington State 2013 NPDES Phase I Municipal Stormwater Permit Perces County 4110:2012

4/10/2012															_		Cost by D	Pepartment	Γ	
Description of Work						Data					Cos	Cost by Year					SWM	PALS		
Task	Permit Section	NPDES C	Number Type of of Action or Actions Units	of Hoursper	Cost per Hour (1)	Job Class	Annual C Servic One time or Equit Job Class I limited time costs Purc	Annual Contracted Services and Equipment Purchases	2013	2014	2015	2016	2017	Total Cost A Total FTE 2013-2017	Average Annual Cost 2013-2017	New FTE New FTE Job Count Class	E Total Costs 2013 to 2017	New FTE New FTE Count Job Class	Total 2013 to 2017 Costs	Comments
os Control S5	Ē		ľ		\$57 TR-SWM	>		New FTI Direct Co	on on	so so	o> o>	3,663	3,663 \$	18,316	3,963	0.04 \	es es		S	laff training line. Training and evaluation to occur annually.
Annual Trainings - Source Control SS.C	۸.	Training	2 Training	19 40	\$57 TR-SWM	SWM Varies		New FTE Direct Cost Indirect Cost	E 0.05 ost \$ 4,579 Cost \$	\$ 4,579	3 4,579	\$ 4,579 \$	\$ 4,579 \$	22,894	\$ 4,579	0.05 Varies	\$ \$ \$	22,894	F	ainer time to prepare, train and evaluate staff annually.
Ss. C8 lifet Connections & lifet Discharges Defection & Elimination Develop an ongoing program to detect and identify lifet \$55.0.8, discharges.		Ilfcit Discharge Detection and Elimination	1 Monitoring	ing 3536	\$55 IDDE-	IDDE - SWM WQ3			E 2.00	. \$ 193,380	\$ 193,360	\$ 193,360	\$ 193,360 \$	2.00	193,360	2.00 WQ3	986 \$		Ongoi	Orgoing program within permit cycle.
Procedures for characterizing, fracing, and eliminating liflot SSC discharges	S5C.8.d.1 IIId Det	Mot Discharge Detection and Elimination	1 Programmatic	matic 180	\$55 IDDE-	IDDE - SWM WQ3	er.	30,000 Indrect Co	s s	so so	\$ 30,000	\$ 30,000	30,000	0.10		0.10 WQ3			Ongoi	Orgoing program within permit cycle.
Meeting new response time requirements for illoit discharges SSC	S5C.8.div IIId Deb	Moit Discharge Detection and Elimination	1 Monitoring	ing 440	\$55 IDDE-	IDDE - SWM WQ3		New FTE Direct Cost			w w	24,061	24,061	120,303	24,061	0.25 WQ3			Ongo	Ongoing program within permit cycle.
Annul Tairing Sessions - IDDE SS.C	S5C.8.e Trai	Taining	32 Training	19 2	\$57 TR-SWM	SWM Varies		New FTE Direct Cost Indirect Cost				3,663	3,663 \$	18,315 9	3,983	0.04 Varies		18,315	Staffe	slaff training time. Training and evaluation to occur annually.
				19 40				New FTI Direct Co	· · · · ·	. \$ 4,579	3 5 4,579	\$ 4,579	\$ 4,579 \$	22,894	\$ 4,579	0.05 Varies	\$ \$ \$	22,894	Traine	ainee time to prepare, train and evaluate staff annually.
Annual Training Sessions - IDDE, PALS SS.C	S5.C.8.e Trai	Taining	22 Training	19 2		PALS Varies		New FTI: Direct Co Indrect (E 0.02 ost \$ 2,518 Cost \$ -	3 2,518	3 2,518	\$ 2,518 9	\$ 2,518 \$	12,592	\$ 2,518	- 00:00		0.02 Varies \$	12,592	training time. Training and evaluation to occur annually.
	S5.C.8.e Trai	Taining	2 Training	19 40	\$57 TR-PALS	PALS Varies		New FTs Direct Co Indrect (E 0.05 ost \$ 4,579 Cost \$ -	\$ 4,579	\$ 4,579	\$ 4,579	\$ 4,579 \$	22,894	\$ 4,579	0.00		0.05 Varies \$	77. 22,894	ainee time to prepare, train and evaluate staff annually.
SS. C9 Operation & Maintenance Program Update maintenance manual(s) SS.C	S5.C.9.a Ope	Operations & Maintenance	1 Ordinanos/ Manual	oe/ 180	\$65 O&M-	O&M-SWM CE2		New FTE	0.10	0.22	0.10			000	8	0.00 OE2			To be	To be completed by 12/31/2014.
Update ordinances related to metherance \$5.0	S5.C.9.b.1 Ope	Operations & Maintenance	1 Ordinance/ Manual	oe/ 180	365 O&M-	O&M - SYM CE2		Indrect Cost New FTE Direct Cost	, s	, .,	.010			0000		0.00 OE2		23. 24.	To be	'o be completed by 12/31/2014.
B-amual inspection of all permanent treatment and flow control SSC 9.b.v. Bodiles and catch basins in new residential developments until 90% of the lots are constructed.		New Development	60 Inspections	8	\$55 DI-PALS	ALS WQ3		New FTE	. 8 0	\$ 0.27		\$ 0.27	\$. \$	1.09		0.00 -	· 50	1.09 WQ3	73.7.87	Estimate based on 2 inspections per year of 30 private maintenance bonds per year with 4 year build out additional 80 actions per year until 120 in 2016, 1 FTE by 2016
Review current 0 & M precioes and policies for all County SSC facilities including rive and open spaces.	S5.C.9.e Ope	Operations & Maintenance	1 Programmatic	natic 40	\$55 O&M-	O&M - SWM WQ3		Indrect Cost New FTE Direct Cost	s s		· v v	2,187	2,187	10,937		0.02 WQ3	. 8			ngoing work performed armuely during permit cycle.
Training of all County employees with construction, operations, \$50.9.1 and maintenance job functions that could impact water quality.		Training	1 Training	19 40	\$55 TR-SWM	SWM WQ3		Indirect Cost New FTE			v> 0	. 8	. §	0.02		0.02 WQ3			Accou	coounts for SWM personnel training other county staff.
S5. C10 Public Education & Outreach Program								Indred Cost	, w	n vn	5 .		9 99				· ••			
Create Stewardship opportunities SSC	S5.C.10b Pub	Public Outreach and Education	1 Permit cycle	yde 440	\$55 OE-SWM	SWM P2		New FTE Direct Cost Indirect Cost	E 0.25	\$ 24,061	24,061	\$ 24,061	24,061 \$	120,303	\$ 24,061	0.25 P2	\$ 5		Ongo	rgoing work performed amually during permit cycle.
Update education and outreach program to reflect updates to SS.C new audiences and subject areas.	\$5.0.10.c Pub	Public Outreach and Education	1 Permit cycle	yde 50	\$55 OE-SWM	SWM P2		New FTE Direct Cost Indirect Cost	E 0.03 ost \$ 2,734 Cost \$ -	\$ 2,734	\$ 2,734	\$ 2,734	\$ 2,734 \$	13,671 \$	2,734	0.03 P2	82 S	13,871	Ongoi	orgaing work performed armuelly during permit cycle.
Measure understanding and adoption of largeted behaviors for SSC of least one new larget audience and one new subject area	DQ1	Public Outreach and Education	1 Permit cycle	yde 50	\$55 OE-SWM	SWM P2	\$ 40,000	New FTE Direct Cost Indirect Cost	Oct \$ 2,734	2,734 \$ 40,000	2,734	\$ 2,734	S 2,734 S	13,671	\$ 2,734	0.03 P2	8 8 5 8	13,671	840,00	10,000 nan labar cost in 2014 for public opinion poil.
57. Compliance With TMDL Requirements include summary of referent activities conducted in TMDL area S7.A to address applicable TMDL parameter(s).	A TMDL	DF.	1 Reporting	ing 20	\$55 TMDL	TMDL-SWM P2		New FTE Direct Cos	0.01	801	801	500	201	0.01	1007	0.01 P2	•	000	Additi	Addional information to be added to arrual report.
TMDL compliance work for Swan, Salmon, Alderton, Ohop, App	Appendix 2 TMDL		200 Monitoring	ing 22	\$55 TMDL	TMDL - SWM WQ3	w	30,000 New FTE	\$ 2.49	- 69	69	. •	. •	249		2.49 WQ3			Assun	ssume 40 outfalls per creek, with non labor cost for equipment.
		,						Direct Cost Indirect Cost	ost \$ 240,607 Cost \$ 30,000	. \$ 240,607 . \$ 30,000	7 \$ 240,607 3 \$ 30,000	\$ 240,607	\$ 240,607 \$	1,203,033	\$ 240,607		\$ 1,203 \$ 150	1,203,033	i	
IMUL work or clars creek App	Appendix 2 IM	IMDL																	TMDL	Placendoer for polema in creased effort related to clarks Creek TMDL - may be updated in final version of permit.

Appendix A Cost of Compilance with the Washington State 2013 NPDES Phase I Municipal Stormwater Permit Perce County
410:2012

															L		Cost by Department	tment	
Description of Work	×				۵	Data					Cost by Year	y Year				SWM		PALS	
Task	Permit Section	NPDES	Number Ty of Act Actions U	Type of Action or Hours per Cost per Units Action Hour (1)	per Cost per	One time or Job Class Imited time costs		Annual Contracted Services and Equipment Purchases	2013	2014	2015	2016	T T 2017	Fotal Cost Aver Total FTE 2013-2017 20	Average Annual Cost Ne 2013-2017 C	New FTE Job Count Class	Total Costs 2013 to 2017	New FTE New FTE Total 2013 to Count Job Class 2017 Costs	Comments
S8. Monitorina																			
Status and Trends Monitoring, Option #2	S.8.C.1.b	Monitoring	1 Mo	Monitoring 970	MN-SWM	M W02		New FTE	0.55					0.55		0.55 W02			City will kolow states QAPP so cost for that not included. Includes 250 to managonitement study and 10 SFT En Condiscious management of state. Tasks expures status and fencted of 15 steam sites and 8 mear shore sites. Monitoring costs start 2014, but staffing
								Direct Cost Indirect Cost	\$ 43,943 \$	43,943	\$ 43,943 \$	43,943 \$	43,943 \$	219,714 \$	43,943	w w	219,714		starts in 2013 to prepare program and proposal.
Effectiveness Study, Option #3	S.8D2	Monitoring	- Mc	Monitoring 530	S45 MN - SVM	M WQ2 \$	40,000 \$	75,000,00 New FTE	0.30					030		0.30 WQ2			Owe time Skille, in 214 for Days - 1008, amaly 2015, 2017 for pervices and expirent. \$577, 210 for annual buy in begingin 2014, FTE thorise 0.25 for amunal import and 0.35 FTE for deathore management of date to sett in 2013 to propare program proposel.
								Direct Cost Indirect Cost	\$ 24,010 \$	\$ 24,010 \$	\$ 24,010 \$ \$ 75,000.00 \$	24,010 \$	24,010 \$	120,050 \$	24,010	on on	120,050		
Source Identification and Diagnostic Monitoring	S.8E.1	Monitoring	1 Mo	Monitoring 220	0 962 MN - SVW	M EB2	69	14,339.00 New FTE Direct Cost		13,645	S 13,645 S	13.645 \$	13.645	0.12 54,579 \$	13,645	0.12 EB2	54.579		Courty will buy in to regional stammader monitoring program. Buy in to regional program and staffing start in 2014.
New FTE (SVVM)								III GILGERI OOSI	10.12	0.60	2	ď	0000	9.27	1.85 927	0	000'10	1.16	
New FTE (PALS) Supervisor Staff (SWM)									0.34	0.27		000	0000	1.16	0.26 1.32			21.0	
Administrative Support (SVM)									0.72			000	000	0.08	0.13 0.66			90.08	
Administrative Support (PALS) Change in FTE									12.70		1.43	002	000	12.66	2.53				
Total New FTE Supervisor Staff and Admin Sumont Costs									\$ 219.305.9	237.72	243	218.88	218.86	1107.891.5	221578	9		1.40	These values calculated ner wear
New Employee Setup Costs									\$ 25,398		, 00 0	+		28,850 \$	5,770				
Additional Staffing and Overhead Subtotal									\$ 1,412,201	. 02	. 02	1,383,825 \$	1,383,164 \$	7,032,096 \$	1,406,419				
NPDES Direct Cost NPDES Indirect Cost Total									\$ 1,034,728 \$ 1,463,000 \$ 3909.929	\$ 1,130,034 \$ 1,852,339	\$ 988,824 \$ \$ 1,162,339 \$ \$ 3,408,877 \$	1,015,072 \$	1,008,584 \$ 1,162,339 \$	5,177,243 \$ 6,802,356 \$	1,035,449	w w w	4,774,285 6,802,356	\$ 402,958 \$ 402,958 \$ 402,958	w w
	Assumptions:																		
		- 0	Number of produ	1768 Number of productive hours/year/FTE (hrs)	TE (hrs)														
		7 nn 2	Ratio of 1:7.1 Su	U.14 Ratio of 1:7.1 supervisory staff for every 7.	₽ :	rect staff (1:7).	10001												

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Pierce County Public Works and Utilities, Surface Water Management Water Quality and Watersheds Section NPDES Stormwater Permit Staffing Matrix

8-Nov-11

	Pierce County NPDES Mu Matrix	Pierce County NPDES Muni SW Permit Staff Tracking Matrix		
Year	Function	Duties	FTE Who	Org Unit
2007	2007 NPDES Permit Management	Coordination, tracking reporting	0.50 Wrye	SWM WQ&WS
2007	2007 NPDES Permit Management	Coordination, tracking reporting	0.50 Collins	SWM WQ&WS
2007	2007 NPDES Permit Management	Coordination, tracking reporting	1.50 Various	Directors, admin, various departments
2007	2007 Operations and Maintenance	Inspections, Private	1.00 Johnson	SWM WQ&WS
2007	2007 Operations and Maintenance	Inspections, Private	1.00 Burkart	SWM WQ&WS
2007	2007 Operations and Maintenance	Inspections, Private	1.00 Smith	SWW WQ&WS
2007	2007 Operations and Maintenance	O&M, County facilities	2.00 Various	ROADS
2007	2007 Operations and Maintenance	O&M, County facilities	2.00 Various	SWM Maintenance
2007	2007 Operations and Maintenance	O&M, County facilities	0.50 Various	Various other departments
2007	2007 NPDES Monitoring	Sampling, investigations	1.00 Various	SWW WQ&WS
2007	2007 NPDES Monitoring	Sampling, investigations	1.00 Various	SWW WQ&WS
2007	2007 Outreach and Education	Outreach	0.50 Lewis	MQ WMS
2007	2007 Development Review	Standards, design reviews	0.50 Dixon	SWMCIP
2007	2007 Structural Source Control	Design	2.00 Various	SWMCIP
2007	2007 Development Review	Standards, design reviews	10.00 Various	PALS DENG
	Development Inspections and	Construction, post construction		
2007	2007 Enforcement	inspection and enforcement	7.00 Various	PALS DENG
Total 2007			32.00	

Pierce County Public Works and Utilities, Surface Water Management Water Quality and Watersheds Section NPDES Stormwater Permit Staffing Matrix

8-Nov-11

•			ı			
	Pierce County NPDES Mu	Pierce County NPDES Muni SW Permit Staff Tracking				
	Matrix					
Year	Function	Duties	FTE Who	OL.	Org Unit	
2008	2008 NPDES Permit Management	Coordination, tracking reporting	0.50 Wrye	ye	SWM WQ&WS	
2008	2008 NPDES Permit Management	Coordination, tracking reporting	0.50 Collins	llins	SWM WQ&WS	
2008	2008 NPDES Permit Management	Coordination, tracking reporting	1.50 Various	rious	Directors, admin, various departments	
2008	2008 NPDES Permit Management	Coordination, tracking reporting	0.50 Strom	mo.	SWM WQ&WS	
2008	2008 Operations and Maintenance	Inspections, Private	1.00 Johnson	nosut	SWM WQ&WS	
2008	2008 Operations and Maintenance	Inspections, Private	1.00 Burkart	rkart	SWM WQ&WS	
2008	2008 Operations and Maintenance	Inspections, Private	1.00 Smith	iith	SWM WQ&WS	
2008	2008 Operations and Maintenance	Inspections, Private	1.00 Perez	rez	SWM WQ&WS	
2008	2008 Operations and Maintenance	O&M, County facilities	2.00 Various	rious	ROADS	
2008	2008 Operations and Maintenance	O&M, County facilities	2.00 Various	rious	SWM Maintenance	
2008	2008 Operations and Maintenance	O&M, County facilities	0.50 Various	rious	Various other departments	
2008	2008 NPDES Monitoring	Sampling, investigations	1.00 Various	rious	SWM WQ&WS	
2008	2008 NPDES Monitoring	Sampling, investigations	1.00 Various	rious	SWM WQ&WS	
2008	2008 Outreach and Education	Outreach	0.50 Lewis	wis	SWM DM	
2008	2008 Development Review	Standards, design reviews	0.50 Dixon	con con	SWM CIP	
2008	2008 Structural Source Control	Design	2.00 Various	rious	SWM CIP	
2008	2008 Development Review	Standards, design reviews	10.00 Various	rious	PALS DENG	
	Development Inspections and	Construction, post construction				
2008	2008 Enforcement	inspection and enforcement	7.00 Various	rious	PALS DENG	
Total 2008			33.50			
						1

8-Nov-11

Pierce County Public Works and Utilities, Surface Water Management Water Quality and Watersheds Section

NPDES Stormwater Permit Staffing Matrix

	Pierce County NPDES Muni SW Per	ni SW Permit Staff Tracking			
	Matrix				
Year	Function	Duties	FTE W	Who	Org Unit
2009	2009 NPDES Permit Management	Coordination, tracking reporting	0.50 Wrye	rye	SWM WQ&WS
2009	2009 NPDES Permit Management	Coordination, tracking reporting	0.50 Collins	ollins	SWM WQ&WS
2009	2009 NPDES Permit Management	Coordination, tracking reporting	1.50 Various	ırious	Directors, admin, various departments
2009	2009 NPDES Permit Management	Coordination, tracking reporting	0.50 Strom	rom	SWM WQ&WS
2009	2009 NPDES Permit Management	Coordination, tracking reporting	1.00 Dudra	ıdra	SWM WQ&WS
2009	2009 Operations and Maintenance	Inspections, Private	1.00 Johnson	hnson	SWM WQ&WS
2009	2009 Operations and Maintenance	Inspections, Private	1.00 Burkart	ırkart	SWM WQ&WS
2009	2009 Operations and Maintenance	Inspections, Private	1.00 Smith	nith	SWM WQ&WS
2009	2009 Operations and Maintenance	Inspections, Private	1.00 Perez	rez	SWM WQ&WS
2009	2009 Operations and Maintenance	Inspections, Private	1.00 Li	1.00 Lightburn	SWM WQ&WS
2009	2009 Operations and Maintenance	O&M, County facilities	2.00 Various	ırious	ROADS
2009	2009 Operations and Maintenance	O&M, County facilities	2.00 Various	ırious	SWM Maintenance
2009	2009 Operations and Maintenance	O&M, County facilities	0.50 Various	ırious	Various other departments
2009	2009 NPDES Monitoring	Sampling, investigations	1.00 Various	arious	SWM WQ&WS
2009	2009 NPDES Monitoring	Sampling, investigations	1.00 Various	arious	SWM WQ&WS
2009	2009 Outreach and Education	Outreach	0.50 Le	Lewis	SWM DM
2009	2009 Development Review	Standards, design reviews	0.50 Various	ırious	SWM CIP
2009	2009 Structural Source Control	Design	2.00 Various	ırious	SWM CIP
2009	2009 Development Review	Standards, design reviews	10.00 Various	arious	PALS DENG
	Development Inspections and	Construction, post construction			
2009	2009 Enforcement	inspection and enforcement	7.00 Various	ırious	PALS DENG
Total 2009			35.50		

Pierce County Public Works and Utilities, Surface Water Management Water Quality and Watersheds Section NPDES Stormwater Permit Staffing Matrix

8-Nov-11

Year Eur	Function 2010 NPDES Permit Management 2010 Operations and Maintenance 2010 Operations and Maintenance 2010 Operations and Maintenance	Duties Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private	0.50	Who	Org Unit
2010 NP 2010 OP 2010 O	DES Permit Management ers Management DES Permit Management DES Permit Management DES Permit Management erations and Maintenance erations and Maintenance	Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private	0.50		
2010 NP 2010 OP 2010 O	DES Permit Management	Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private Inspections, Private	0.50		
2010 NPI 2010 NPI 2010 NPI 2010 NPI 2010 NPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI	DES Permit Management erations and Maintenance erations and Maintenance	Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private Inspections, Private	0.50	0.50 Wrye	SWM WQ&WS
2010 NPI 2010 NPI 2010 NPI 2010 NPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI 2010 OPI	DES Permit Management erations and Maintenance erations and Maintenance	Coordination, tracking reporting Coordination, tracking reporting Coordination, tracking reporting Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private Inspections, Private	5	0.50 Collins	SWM WQ&WS
2010 NPI 2010 NPI 2010 NPI 2010 NPI 2010 OPI 2010 OPI 2010 OPI	DES Permit Management DES Permit Management DES Permit Management DES Permit Management erations and Maintenance erations and Maintenance	Coordination, tracking reporting Coordination, tracking reporting Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private Inspections, Private	2.00	2.00 Various	Directors, admin, various departments
2010 NP 2010 NP 2010 NP 2010 Op	DES Permit Management DES Permit Management DES Permit Management erations and Maintenance erations and Maintenance	Coordination, tracking reporting Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private Inspections, Private	0.50	0.50 Strom	SWM WQ&WS
2010 NPI 2010 NPI 2010 Opi 2010 Opi	DES Permit Management DES Permit Management erations and Maintenance erations and Maintenance	Coordination, tracking reporting Records keeping and database Inspections, Private Inspections, Private Inspections, Private	1.00	1.00 Dudra	SWM WQ&WS
2010 NP 2010 Op 2010 Op	DES Permit Management erations and Maintenance erations and Maintenance	Records keeping and database Inspections, Private Inspections, Private Inspections, Private	1.00	1.00 Jasionkowski	SWM WQ&WS
2010 Op 2010 Op	erations and Maintenance erations and Maintenance	Inspections, Private Inspections, Private Inspections, Private	1.00	1.00 Officer	SWM WQ&WS
2010 Op/	erations and Maintenance	Inspections, Private Inspections, Private	1.00	1.00 Johnson	SWM WQ&WS
2010 OB	erations and Maintenance	Inspections, Private	1.00	1.00 Lines	SWM WQ&WS
<u> </u>			1.00	1.00 Felton	SWM WQ&WS
2010 Op	2010 Operations and Maintenance	Inspections, Private	1.00	1.00 Perez	SWM WQ&WS
2010 Op	2010 Operations and Maintenance	Inspections, Private	1.00	1.00 Lightburn	SWM WQ&WS
2010 Op	2010 Operations and Maintenance	Inspections, Public	1.00	1.00 Smith	SWM WQ&WS
2010 Op	2010 Operations and Maintenance	Inspections, Public	1.00	1.00 Burkhart	SWM WQ&WS
2010 Op	2010 Operations and Maintenance	County Facilities Tech Assist	1.00	1.00 Kruse	SWM WQ&WS
2010 IDDE)E	Compliance and enforcement	1.00	1.00 Gillette	SWM WQ&WS
2010 IDDE)E	Compliance and enforcement	1.00	1.00 Greco	SWM WQ&WS
2010 Op	2010 Operations and Maintenance	O&M, County facilities	2.00	2.00 Various	ROADS
2010 Op	2010 Operations and Maintenance		2.00	2.00 Various	SWM Maintenance
2010 Op	2010 Operations and Maintenance	O&M, County facilities	0.50	0.50 Various	Various other departments
2010 NP	2010 NPDES Monitoring	Sampling, investigations	1.00	1.00 Klavano	SWM WQ&WS
2010 NP	DES Monitoring	Sampling, investigations	1.00	1.00 Eldridge	SWM WQ&WS
2010 NP	2010 NPDES Monitoring	WQ Scientist	1.00	1.00 Vincent	SWM WQ&WS
2010 NP	2010 NPDES Monitoring	GIS Specialst	1.00	1.00 Quenneville	SWM WQ&WS
2010 Ou	2010 Outreach and Education	Outreach	0.50	0.50 Lewis	SWM DM
2010 Ou	2010 Outreach and Education	Outreach	1.00	1.00 Odell	SWM DM
2010 Ou	2010 Outreach and Education	Outreach	1.60	1.60 Various	PCD ILA
2010 Dev	2010 Development Review	Standards, design reviews	0.50	0.50 Various	SWM CIP
2010 Str	2010 Structural Source Control	Design	2.00	2.00 Various	SWM CIP
2010 Dev	2010 Development Review	Standards, design reviews	10.00	10.00 Various	PALS DENG
2010 De	2010 Development Review	Standards, design reviews	2.00	2.00 Various	PALS DENG
Dev	Development Inspections and	Construction, post construction			
2010 Ent	forcement	inspection and enforcement	7.00	7.00 Various	PALS DENG
De	Development Inspections and	Construction, post construction			
	2010 Enforcement	inspection and enforcement	2.50	2.50 Various	PALS DENG
Total 2010			52.10		

SWM WQ&WS SWM WQ&WS

0.50 Wrye 1.00 Collins

Coordination, tracking reporting Coordination, tracking reporting

2011 NPDES Permit Management 2011 NPDES Permit Management

8-Nov-11

Pierce County Public Works and Utilities, Surface Water Management Water Quality and Watersheds Section

NPDES Stormwater Permit Staffing Matrix

	Pierce County NPDES Muni SW Perm	uni SW Permit Staff Tracking		
	Matrix			
Year	Function	Duties	FTE Who	Org Unit
2011	NPDES Permit Management	Coordination, tracking reporting	2.00 Various	Directors, admin, various departments
2011	NPDES Permit Management	Coordination, tracking reporting	0.50 Strom	SWM WQ&WS
2011		Coordination, tracking reporting	1.00 Dudra	SWM WQ&WS
2011		Coordination, tracking reporting	1.00 Jasionkowski	SWM WQ&WS
2011	-	Records keeping and database	1.00 Officer	SWM WQ&WS
2011	Operations and Maintenance	Inspections, Unit Lead	1.00 Lines	SWM WQ&WS
2011	Operations and Maintenance	Inspections, Private	1.00 Vacant WQS2	SWM WQ&WS
2011	Operations and Maintenance	Inspections, Private	1.00 Felton	SWM WQ&WS
201	2011 Operations and Maintenance	Inspections, Private	1.00 Perez	SWM WQ&WS
201	2011 Operations and Maintenance	Inspections, Private	1.00 Lightburn	SWM WQ&WS
201	2011 Operations and Maintenance	Inspections, Public	1.00 Smith	SWM WQ&WS
201	2011 Operations and Maintenance	Inspections, Public	1.00 Burkhart	SWM WQ&WS
2011	Operations and Maintenance	County Facilities Tech Assist	1.00 Kruse	SWM WQ&WS
2011	IDDE	Compliance and enforcement	1.00 Gillette	SWM WQ&WS
2011	IDDE	Compliance and enforcement	1.00 Greco	SWM WQ&WS
2011	IDDE	Compliance and enforcement	1.00 Johnson	SWM WQ&WS
2011	Operations and Maintenance	County	4.00 Various	ROADS
2011	Operations and Maintenance	O&M, County facilities	2.00 Various	SWM Maintenance
2011		O&M, County facilities	3.00 Various	Various other departments
2011	NPDES Monitoring	Sampling, investigations	1.00 Klavano	SWM WQ&WS
201	2011 NPDES Monitoring	Sampling, investigations	1.00 Eldridge	SWM WQ&WS
201	2011 NPDES Monitoring	WQ Scientist	1.00 Vincent	SWM WQ&WS
201	2011 NPDES Monitoring	GIS Specialst	1.00 Quenneville	SWM WQ&WS
201	2011 Outreach and Education	Outreach	0.50 Lewis	SWM DM
201	2011 Outreach and Education	Outreach	1.00 Odell	SWM DM
201	2011 Outreach and Education	Outreach	1.60 Various	Various other departments
201	2011 Development Review	Standards, design reviews	0.50 Various	SWM CIP
2011	Structural Source Control	Design	2.00 Various	SWM CIP
2011	Development Review	Standards, design reviews	7.80 Various	PALS DENG
2011		Standards, design reviews	2.00 Various	PALS DENG
	Development Inspections and	Construction, post construction		
2011	Enforcement	inspection and enforcement	4.00 Various	PALS DENG
Total 2011			50.40	

2012 NPDES Permit Management	Coordination, tracking reporting	0.50 Wrye	SWM WQ&WS
2012 NPDES Permit Management	Coordination, tracking reporting	1.00 Collins	SWM WQ&WS
2012 NPDES Permit Management	Coordination, tracking reporting	2.00 Various	Directors, admin, various departments
2012 NPDES Permit Management	Coordination, tracking reporting	0.50 Strom	SWM WQ&WS
2012 NPDES Permit Management	Coordination, tracking reporting	1.00 Dudra	SWM WQ&WS

8-Nov-11

Pierce County Public Works and Utilities, Surface Water Management Water Quality and Watersheds Section NPDES Stormwater Permit Staffing Matrix

	Pierce County NPDES Mu	Pierce County NPDES Muni SW Permit Staff Tracking	_	
	Matrix			
Year	Function	Duties	FTE Who	Org Unit
2012	NPDES Permit Management	Coordination, tracking reporting	1.00 Jasionkowski	SWM WQ&WS
2012	2012 NPDES Permit Management	Records keeping and database	1.00 Officer	SWM WQ&WS
2012	2012 Operations and Maintenance	Inspections, Unit Lead	1.00 Lines	SWM WQ&WS
2012	2012 Operations and Maintenance	Inspections, Private	1.00 Vacant WQS2	SWM WQ&WS
2012	2012 Operations and Maintenance	Inspections, Private	1.00 Felton	SWM WQ&WS
2012	2012 Operations and Maintenance	Inspections, Private	1.00 Perez	SWM WQ&WS
2012	2012 Operations and Maintenance	Inspections, Private	1.00 Lightburn	SWM WQ&WS
2012	2012 Operations and Maintenance	Inspections, Public	1.00 Smith	SWM WQ&WS
2012	Operations and Maintenance	Inspections, Public	1.00 Burkhart	SWM WQ&WS
2012	Operations and Maintenance	County Facilities Tech Assist	1.00 Kruse	SWM WQ&WS
2012	IDDE	Compliance and enforcement	1.00 Gillette	SWM WQ&WS
2012	IDDE	Compliance and enforcement	1.00 Greco	SWM WQ&WS
2012	IDDE		1.00 Johnson	SWM WQ&WS
2012	2012 Operations and Maintenance		4.00 Various	ROADS
2012	2012 Operations and Maintenance	O&M, County facilities	2.00 Various	SWM Maintenance
2012	2012 Operations and Maintenance	O&M, County facilities	3.00 Various	Various other departments
2012	2012 NPDES Monitoring	Sampling, investigations	1.00 Klavano	SWM WQ&WS
2012	2012 NPDES Monitoring	Sampling, investigations	1.00 Eldridge	SWM WQ&WS
2012	2012 NPDES Monitoring	WQ Scientist	1.00 Vincent	SWM WQ&WS
2012	2012 NPDES Monitoring	GIS Specialst	1.00 Quenneville	SWM WQ&WS
2012	2012 Outreach and Education	Outreach	0.50 Lewis	SWM DM
2012	Outreach and Education	Outreach	1.00 Odell	SWM DM
2012	Outreach and Education	Outreach	1.60 Various	Various other departments
2012	Development Review	Standards, design reviews	0.50 Various	SWM CIP
2012	2012 Structural Source Control	Design	2.00 Various	SWM CIP
2012	Development Review	Standards, design reviews	7.80 Various	PALS DENG
2012	2012 Development Review	Standards, design reviews	2.00 Various	PALS DENG
	Development Inspections and	Construction, post construction		
2012	2012 Enforcement	inspection and enforcement	4.00 Various	PALS DENG
Total 2012			50.40	

Explanation of Beck Implementation

# FTEs		Comment
25.9	25.9 2008 Beck Report Cost of New Permit for 2010	Permit for 2010
		March 2010 PALS est from reduced site
		plan reviews and inspections and
7	-4 Less Reduced Development	enforcement
21.5	21.9 subtotal	

Pierce County Public Works and Utilities, Surface Water Management Water Quality and Watersheds Section NPDES Stormwater Permit Staffing Matrix

8-Nov-11

bu gu		FTE Who Org Unit		:10)	rom)				A			
ni SW Permit Staff Trackin		Duties	Redirect existing staff	ed (or the Delta between 2007-	Perez, Lightburn, Dudra, 0.5 Strom)		2010 only		2 ET3s, 4 ET2s, P2, RS, EB, OA		Fund switch	
Pierce County NPDES Muni SW Permit Staff Tracking	Matrix	Function	-1.9 Less Roads efficiencies	20 The New Need to be Fully Funded (or the Delta between 2007-10)	-3.5 Less SWM 08-09 adds	16.5 subtotal	-1.6 Less PCD ILA	14.9 subtotal	-10 Less SWM 2010 adds	4.9 subtotal	-4.5 Less PALs 2010 adds	
		Year	1.9	. 70	-3.5	16.5	-1.6 L	14.9	-10 F	4.9 \$	-4.5 L	

Exhibit 5 Pierce County Homeowners Association (HOA) Workshop Brochure and Training Presentation

Pierce County Homeowners Association (HOA) Workshop

Stormwater System Maintenance and HOA Management



Does your HOA have a stormwater pond or other stormwater drainage system? Learn how to maintain your system.

Does your HOA need to be better organized? Learn how your HOA can work more effectively.

You are invited to attend a **free** workshop on stormwater system maintenance and HOA management.

During the workshop, residents will:

- Learn why maintenance is an important part of your asset management plan, and basic stormwater system maintenance.
- Learn from a specialist the basics of HOA operational needs, and strategies for a successful HOA.

When & Where

Thursday, April 28 - Bonney Lake East Pierce Fire & Rescue Safety Bldg 18421 Old Buckley Hwy, Bonney Lake

Thursday, May 5 - Graham Graham Library 9202 224th St. E., Graham

Wednesday, June 8 - Gig Harbor Gig Harbor Library 4424 Pt. Fosdick Dr. NW, Gig Harbor

All workshops are 6:00 - 8:30 pm

For more information and to register for the <u>free</u> workshops, please contact:

Rosie Strom

Phone: 253-798-2485

E-mail: rstrom@co.pierce.wa.us

Registration is required. Seating is limited, so register early.

If available, HOAs will receive a copy of their engineered stormwater site plans. Register at least 1 week prior to the workshop to ensure a copy will be available at the workshop.

For additional information: www.piercecountywa.org/techassist www.piercecountywa.org/wgws





2011 PIERCE COUNTY WATER QUALITY HOMEOWNER ASSOCIATION WORKSHOP



Workshop Agenda

- · 6:00 Check In
- 6:15 Welcome & Introductions
- 6:30 Stormwater Overview Why, How, What
- 6:45 How to Maintain Residential Systems
 Common facilities
 What to look for, what to do,

 - how often
 Importance of a stormwater
 - maintenance program

 Technical assistance resources
- 6:45 Questions and answers
- 7:00 Effective Home Owners' Associations & Budgeting for Stornwater maintenance with Juanita Caribaugh, Consultant with HOA Community Solutions.
- 8:00-8:30 Questions and answers for Juanita, Meet your Technical Assistance Staff from Pierce County Stormwater Management in the back of the room.
- Items Available to Attendees

 Copy of Site Plans (if they exist)
 Gate lock loan signup

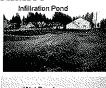
Pierce County

Inspections and Maintenance

- · 450 public ponds
- · 1000+ private ponds
- 1500+ PPGS



Detention Pond





How to prevent water pollution



*Pierce County stormwater drainage systems are designed to capture rain from roads and other hard surfaces and channel I to natural waterways such as lakes, streams, rivers and Puget Sound. This round fpicks up pollutants, such as auto oil, fertillier, and car wash soep, and goes directly into our local waterways, in many cases without treatment.

- many cases without treatment.

 You can help prevent water pollution by
 following these simple actions:

 Minimate the use of lawn chemicals. Sweep
 fertillites off iddewalks and driveways so it
 doesn't get into storm drains.

 Sweep your driveway, sidewalk, and pallot
 and put the debts in your trash, Hosing it
 down with water sends debts and pollutants
 into our local waterways.

 Pick up pet waste, bag it and place it in the
 trash, Pet waste contains bacterie, viruses,
 and parasites that harm people and fish,

Encourage rain to soak into the ground by redirecting roof downspouts to drain rain into a rain barrel or rain garden.





- · Wash your car at a commercial car wash or on a grassy area. Commercial car washes send the wash water to a treatment plant so it doesn't end up in local waterways. Do not wash your car on driveways or in the street.
- Attend a free workshop on maintaining stormwater systems for homeowner associations. Call 253-798-2485 for dates and locations.



n mains in an <i>"infiitration</i> pond"
mains in an "infiltration pond"
mains in an "infiltration cond"
Save your HOA Money by using
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Tips for Effective Residential Stormwater Management Programs

- Make a checklist
 - "Stormwater Maintenance Manual for Private Facilities"
 - Access online www.piercecountywa.org/prifacman
- Make inspections routine
- Monthly, after every major storm event
- Same people, be consistent
- Have work parties
 - Neighborhood event
 - Trash, debris, vegetation, limited sediment removal

	Pierce County
SUSSESSESSESSESSESSESSESSESSESSESSESSESS	AUDDING STATEMENT AND AUDIO

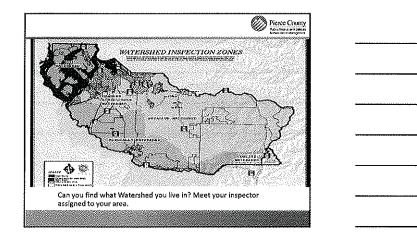
Tips for Effective Residential Stormwater Management Programs (cont.)

- Know your limitations
 - Safety concerns
- Make facility accessible
 - If gate code, please let us know
- Keep a record!
 - Helps predicting future needs
 - Helps to control costly major repair
 - Average Cost may vary, Courtesy contractor list are available for price quotes.



Take Home Messages

- Stormwater a major source of pollution to Puget Sound
- Your Stormwater System is important
 - Protect water quality, reduce flooding
 - Part of your investment
 - Protect it by maintaining it
- Maintenance not rocket science
 - Prevent blockage or clogging
 - Sediment
 - Vegetation
 - Trash and debris



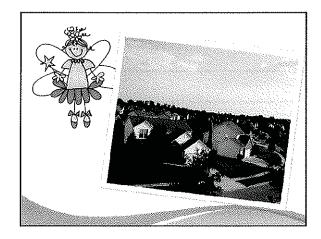
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	Juanita	i Carbaugh, CMCA
		amunity Solutions

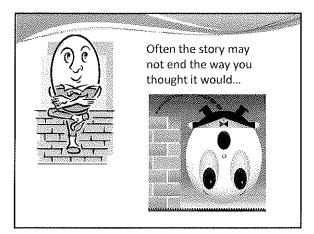
Welcome

- \circ Introductions
 - Your name
 - Your community
 - Your role within the community

What We Will Cover

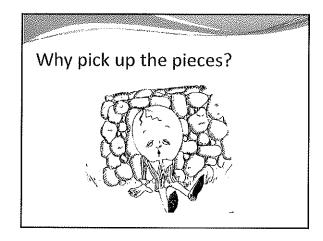
- Legal basis for HOAs
- Protecting your property values
 - Common elements... what you own
- Savvy home buyers what they are looking for?
 - Well maintained property
 - Reserve funds
- You have a choice... what happens if your owners choose to do nothing?
- Next steps for your community?

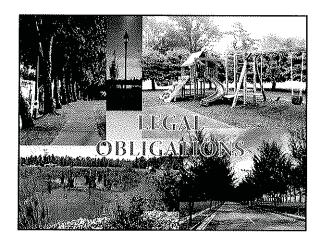




Why?

- Owners aren't properly prepared for expectations of how to manage the Association after the developer's period of control expires
- Poorly written governing documents
- Apathy no interest from owners. No one has time to give so the "association just fades away"
- Adversity conflict
- Your community's reasons?



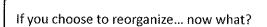


How do you know what the legal obligations are?

- Plat maps
 - Online downloadable http://instawch.co.pacico.wa.usc
 - Agreement with the county regarding the responsibilities of maintenance
- Declaration of Protective Covenants (CC&Rs)
- The easements and CC&R's "run with the land".
 - Binding on all parties that own a lot within the subdivision

What if you choose to do nothing?

- You may find the commonly owned property is in dire need of repairs and replacements
- · A certificate of non-compliance could be recorded against the properties if maintenance is not completed
- You could have a lien filed against your home if another entity has to step in and do the maintenance
- Potential for legal liability
- You may have a hard time selling your home





Next Steps

- 1. Get organized
- Communicate with other owners
- 3. Hold a re-organization meeting to:
 - Communicate
 - Agree on Priorities for the Association.
 Elect board
- Begin implementation
 Elect Officers
 Develop budget
 Collect enough dues to cover basic seasonal maintenance and required maintenance of your common elements
 Maintenance of Common Elements

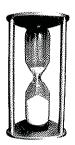
Why Collect dues?

- · Dues do not have to be exorbitant
- Like saving for retirement, the longer you wait... the more you will have to invest.
- Why not have homeowners just do the work?
 - Some work just isn't safe for owners to do on their own
 - · Same people do all the work
 - Burnout and quit (taken advantage of)
 - « Move away, get sick, die



1. Get organized

- Identify who will lead the effort in your community
- Identify key dates/timelines
- Identify quorum needed for meeting (found in original bylaws)



2. Get the message out



- Send letter to all owners clearly explaining the issues
- Go door to door to explain the issues facing the community and the solution.
- Take a nomination form and a ballot with you to each home.
- Ask for help!

3. Hold a Community meeting

- Make sure you have a quorum
- Address questions
- Allow for input and feedback
- Agree on priorities
- Elect board of Directors
- Adopt new bylaws (if you cannot find the original bylaws)



4. Begin Implementation

- * Board Elects Officers (as outlined in the bylaws)
- Develop Budget for basic operations (including all required maintenance)
- Ratify budget
- Consider Insurance
- Consider Incorporating (\$10.00 per year)
- 6 Collect Assessments
- Begin the management and maintenance of commonly owned elements

Establish timeline Whit Mits He Done Leaders identified for neighborhood campaign Identify possible board candidates Look for old documents (CC&R's & bylaws) Letter & ballot drafted to neighbors Plan a door to door campaign (take ballots with you) Community Meeting - elect board Board Meeting - Elect Officers Develop budget for operations - mail to community and hold ratification meeting Minimal Assessment Levied & Collected Begin Maintenance!

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Pierce County Public Works & Utilities
Surface Water Management
(253) 798-2725
(Ask to be connected with the inspector assigned to your area)

Exhibit 6

Pierce County 2008 Stormwater Management and Site Development Manual, Effective Date March 1, 2009

Note - The Pierce County 2008 Stormwater Management and Site Development Manual in its entirety has not been included, instead the sections listed below from Volume IV have been included as Exhibit 6.

- 1) Section 2.4.2 Minimum Requirement #2: Construction Stormwater Pollution Prevention
 - 2) Element #9: Control Pollutants
 - 3) Element #12: Manage the Project
 - 4) BMP C153: Material Delivery, Storage and Containment
 - 5) BMP C160: Certified Erosion and Sediment Control Lead

Pierce County 2008 Stormwater Management and Site Development Manual

ORDINANCE 2008-59S EFFECTIVE DATE MARCH 1, 2009



Pierce County Public Works & Utilities
Surface Water Management
2702 42nd Street, Suite 201
Tacoma, Washington 98409
(253) 798-2725
www.piercecounty.org/swm

Pierce County Stormwater Management and Site Development Manual

Pierce County Code

Title 11 – STORM DRAINAGE AND SURFACE WATER MANAGEMENT Title 17A – CONSTRUCTION AND INFRASTRUCTURE REGULATIONS - SITE DEVELOPMENT AND STORMWATER DRAINAGE

Title 18E - FLOODPLAIN REGULATIONS

Prepared by: Pierce County Surface Water Management

Ordinance No. 2008–59S August 2008 Effective Date: March 1, 2009

- Drainage Control Plan
- Erosion and Sediment Control Plan
- Engineered Abbreviated Plan
- Abbreviated Plan.

Completing the applicable plan in accordance with the requirements in Chapter 3 will meet Minimum Requirement #1.

Objective

The 2,000 square feet threshold for impervious surfaces and 7,000 square foot threshold for land disturbance are specified by Ecology to capture most single family home construction and their equivalent. The county-specific thresholds identified in Chapter 3, Table 3.1 were developed to meet more specific Pierce County needs and interests, without negating Ecology's requirements.

2.4.2 Minimum Requirement #2: Construction Stormwater Pollution Prevention

All new development and redevelopment shall comply with Construction SWPPP Elements #1 through #12 as detailed in Volume II, Section 2.2.3. The twelve elements are summarized below, but project applicants must refer to Volume II, Section 2.2.3 for the full list of applicable requirements.

Projects in which the new, replaced, or new plus replaced impervious surfaces total 2,000 square feet or more, or disturb 7,000 square feet or more of land must prepare a Construction SWPPP as part of the Stormwater Site Plan (see 2.4.1). Each of the 12 elements must be considered and included in the Construction SWPPP unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the narrative of the SWPPP.

Projects that add or replace less than 2,000 square feet of impervious surface or disturb less than 7,000 square feet of land are not required to prepare a Construction SWPPP, but must consider all of the 12 Elements of Construction Stormwater Pollution Prevention and develop controls for all elements that pertain to the project site.

These elements cover the general water quality protection strategies of limiting site impacts, preventing erosion and sedimentation, and managing activities and sources to during the construction phase of a project.

The 12 elements are:

Element #7: Protect Drain Inlets

- All storm drain inlets made operable during construction shall be protected so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
- All approach roads shall be kept clean. Sediment and street wash wastewater shall be controlled as specified above in Element #2.
- Inlets should be inspected weekly at a minimum and daily during storm events. Inlet protection devices should be cleaned or removed and replaced when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
- Suggested BMPs:
 - o BMP C220: Storm Drain Inlet Protection.

Element #8: Stabilize Channels and Outlets

- All temporary onsite conveyance channels shall be designed, constructed and stabilized to prevent erosion from the expected peak 10 minute velocity of flow from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour time step flow rate indicated by an approved continuous runoff model, increased by a factor of 1.6, may be used. If a 15-minute (or less) time step is used, no correction factor is required. The hydrologic analysis shall use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis shall use the temporary or permanent project land cover condition, whichever will produce the highest flow rates.
- Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches shall be provided at the outlets of all conveyance systems.
- Suggested BMPs:

o BMP C202: Channel Lining

o BMP C209: Outlet Protection.

Element #9: Control Pollutants

 All pollutants, including waste materials and demolition debris, that occur onsite shall be handled and disposed of in a manner that does not cause contamination of stormwater. Woody debris may be chopped and spread on site.

- Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. Onsite fueling tanks shall include secondary containment.
- Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drain down, solvent and de-greasing cleaning operations, fuel tank drain down and removal, and other activities which may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures, such as drip pans. Contaminated surfaces shall be cleaned immediately following any discharge or spill incident. Emergency repairs may be performed on site using temporary plastic placed beneath and, if raining, over the vehicle.
- Wheel wash or tire bath wastewater shall be discharged to a separate onsite treatment system or to the sanitary sewer.
- Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to stormwater runoff.
 Manufacturers' recommendations for application rates and procedures shall be followed.
- BMPs shall be used to prevent or treat contamination of stormwater runoff by pH modifying sources. These sources include, but are not limited to, bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate processes, and concrete pumping and mixer washout waters. Stormwater discharges shall not cause or contribute to a violation of the water quality standard for pH in the receiving water.
- Construction sites shall adjust the pH of stormwater if necessary to prevent violations of water quality standards. Projects must obtain written approval from the Department of Ecology prior to using chemical treatment other than CO₂ or dry ice to adjust pH.
- Suggested BMPs:
 - o BMP C151: Concrete Handling
 - o BMP C152: Sawcutting and Surfacing Pollution Prevention
 - See Volume IV Source Control BMPs.

Element #12: Manage the Project

Phasing of Construction

- Development projects shall be phased where feasible in order to prevent soil erosion and, to the maximum extent practicable, the transport of sediment from the site during construction.
 Revegetation of exposed areas and maintenance of that vegetation shall be an integral part of the clearing activities for any phase.
- Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g., subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling. When establishing these permitted clearing and grading areas, consideration should be given to minimizing removal of existing trees and minimizing disturbance/compaction of native soils except as needed for building purposes. These permitted clearing and grading areas and any other areas required to preserve critical or sensitive areas, buffers, native growth protection easements, or tree retention areas as may be required by local jurisdictions, shall be delineated on the site plans and the development site.
- Seasonal Work Limitations:

From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if shown to the satisfaction of the county that silt-laden runoff will be prevented from leaving the site through a combination of the following:

- Site conditions including existing vegetative coverage, slope, soil type, and proximity to receiving waters
- o Limitations on activities and the extent of disturbed areas
- o Proposed ESC measures.
- Based on the information provided and/or local weather conditions, the county may expand or restrict the seasonal limitation on site disturbance. The county shall take enforcement action – such as a notice of violation, administrative order, penalty, or stop-work order under the following circumstances:
 - If, during the course of any construction activity or soil disturbance during the seasonal limitation period, sediment leaves the construction site causing a violation of the surface water quality standard

- If clearing and grading limits or ESC measures shown in the approved plan are not maintained.
- The following activities are exempt from the seasonal clearing and grading limitations:
 - o Routine maintenance and necessary repair of ESC BMPs
 - Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil
 - Activities where there is 100 percent infiltration of surface water runoff within the site in approved and installed ESC facilities.

Coordination with Utilities and Other Contractors

- The primary project applicant shall evaluate, with input from utilities and other contractors, the stormwater management requirements for the entire project, including the utilities, when preparing the Construction SWPPP.
- Inspection and Monitoring:
 - All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. Site inspections shall be conducted by a person who is knowledgeable in the principles and practices of ESC. The person must have the skills to: 1) assess the site conditions and construction activities that could impact the quality of stormwater and 2) assess the effectiveness of ESC measures used to control the quality of stormwater discharges.
 - o For construction sites that will disturb 1 acre or more and that discharge stormwater to surface waters of the state, a Certified Erosion and Sediment Control Lead (CESCL) shall be identified in the Construction SWPPP and shall be on site or on-call at all times. Certification may be obtained through an approved training program that meets the ESC training standards established by Ecology.
 - Whenever inspection and/or monitoring reveals that the BMPs identified in the Construction SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, appropriate BMPs or design changes shall be implemented as soon as possible.

- Maintaining an updated Construction SWPPP:
 - o The Construction SWPPP shall be retained on site or within reasonable access to the site.
 - The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the state.
 - The SWPPP shall be modified if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The SWPPP shall be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP shall be completed within 7 days following the inspection.

2.3 Construction Stormwater Pollution Prevention Requirements

The Construction SWPPP shall consist of two parts: a narrative and the drawings. The following two sections describe the contents of the narrative and the drawings. A checklist is included that can be used as a quick reference to determine if all the major items are included in the Construction SWPPP. Note that project applicants typically will also be required to develop an Erosion and Sediment Control Plan as outlined in Volume I, Chapter 3. The SWPPP makes up the majority of the erosion and sediment control plan submittal.

2.3.1 Narrative

- Twelve elements Describe how the Construction SWPPP addresses each of the 12 required elements. Include the type and location of BMPs used to satisfy the required element. If an element is not applicable to a project, provide a written justification for why it is not necessary.
- Project description Describe the nature and purpose of the construction project. Include the total size of the area, any increase in existing impervious area; the total area expected to be disturbed by clearing, grading, excavation or other construction activities, including offsite borrow and fill areas; and the volumes of grading cut and fill that are proposed.

BMP C153: Material Delivery, Storage and Containment

Purpose

Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the stormwater system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in a designated area, and installing secondary containment.

Conditions of Use

These procedures are suitable for use at all construction sites with delivery and storage of the following materials:

- Petroleum products such as fuel, oil and grease
- Soil stabilizers and binders (e.g., Polyacrylamide)
- Fertilizers, pesticides and herbicides
- Detergents
- Asphalt and concrete compounds
- Hazardous chemicals such as acids, lime, adhesives, paints, solvents and curing compounds
- Any other material that may be detrimental if released to the environment.

Design and Installation Specifications

The following steps should be taken to minimize risk:

- Temporary storage area should be located away from vehicular traffic, near the construction entrance(s), and away from waterways or storm drains.
- Material safety data sheets should be supplied for all materials stored. Chemicals should be kept in their original labeled containers.
- Hazardous material storage on site should be minimized.
- Hazardous materials should be handled as infrequently as possible.
- During the wet weather season (October 1 to April 30), consider storing materials in a covered area.

- Materials should be stored in secondary containments, such as earthen dike, horse trough, or even a children's wading pool for non-reactive materials such as detergents, oil, grease, and paints.
 Small amounts of material may be secondarily contained in "bus boy" trays or concrete mixing trays.
- Do not store chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and, when possible, in secondary containment.
- If drums must be kept uncovered, store them at a slight angle to reduce ponding of rainwater on the lids to reduce corrosion.

 Domed plastic covers are inexpensive and snap to the top of drums, preventing water from collecting.

Material Storage Areas and Secondary Containment Practices:

- Liquids, petroleum products, and substances listed in 40 CFR Parts 110, 117, or 302 shall be stored in approved containers and drums and shall not be overfilled. Containers and drums shall be stored in temporary secondary containment facilities.
- Temporary secondary containment facilities shall provide for a spill containment volume able to contain precipitation from a 25-year, 24-hour storm event, <u>plus</u> 10 percent of the total enclosed container volume of all containers, <u>or</u> 110 percent of the capacity of the largest container within its boundary, whichever is greater.
- Secondary containment facilities shall be impervious to the materials stored therein for a minimum contact time of 72 hours.
- Secondary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills shall be collected and placed into drums. These liquids shall be handled as hazardous waste unless testing determines them to be non-hazardous.
- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.
- During the wet weather season (October 1 to April 30), each secondary containment facility shall be covered during non-working days, prior to and during rain events.
- Keep material storage areas clean, organized and equipped with an ample supply of appropriate spill cleanup material (spill kit).

- The spill kit should include, at a minimum:
 - o 1 water resistant nylon bag
 - o 3 oil absorbent socks 3 inches x 4 feet
 - o 2 oil absorbent socks 3 inches x 10 feet
 - o 12 oil absorbent pads 17 inches x 19 inches
 - o 1 pair splash resistant goggles
 - o 3 pair nitrile gloves
 - o 10 disposable bags with ties
 - o Instructions.

BMP C160: Certified Erosion and Sediment Control Lead

Purpose

The project applicant designates at least one person as the responsible representative in charge of ESC, and water quality protection. The designated person shall be the CESCL who is responsible for ensuring compliance with all local, state, and federal ESC and water quality requirements.

Conditions of Use

A CESCL shall be made available on projects disturbing ground 1 acre or larger and that discharge stormwater to surface waters of the state.

The CESCL shall:

- Have a current certificate proving attendance in an ESC training course that meets the minimum ESC training and certification requirements established by Ecology (see details below).
- Ecology will maintain a list of ESC training and certification providers at: www.ecy.wa.gov/programs/wq/stormwater>.

OR

 Be a Certified Professional in Erosion and Sediment Control (CPESC); for additional information go to: www.cpesc.net>.

Specifications

Certification shall remain valid for 3 years.

- The CESCL shall have authority to act on behalf of the contractor or developer and shall be available, on call, 24 hours per day throughout the period of construction.
- The Construction SWPPP shall include the name, telephone number, fax number, and address of the designated CESCL.
- A CESCL may provide inspection and compliance services for multiple construction projects in the same geographic region.

Duties and responsibilities of the CESCL shall include, but are not limited to the following:

 Maintaining permit file on site at all times which includes the SWPPP and any associated permits and plans.

- Directing BMP installation, inspection, maintenance, modification, and removal.
- Updating all project drawings and the Construction SWPPP with changes made.
- Keeping daily logs, and inspection reports. Inspection reports should include:
 - o Inspection date/time.
 - Weather information; general conditions during inspection and approximate amount of precipitation since the last inspection.
 - A summary or list of all BMPs implemented, including observations of all erosion/sediment control structures or practices. The following shall be noted:
 - Locations of BMPs inspected
 - Locations of BMPs that need maintenance
 - Locations of BMPs that failed to operate as designed or intended, and
 - Locations of where additional or different BMPs are required.
 - Visual monitoring results, including a description of discharged stormwater. The presence of suspended sediment, turbid water, discoloration, and oil sheen shall be noted, as applicable.
 - o Any water quality monitoring performed during inspection.
 - General comments and notes, including a brief description of any BMP repairs, maintenance or installations made as a result of the inspection.
- Facilitate, participate in, and take corrective actions resulting from inspections performed by outside agencies or the owner.

MS4 Program Compliance Inspection Pierce County, Washington
Exhibit 7
Remann Hall Facility Stormwater Pollution Protection Plan, dated
November 2010

SWPPP

REMANN HALL FACILITY

Stormwater Pollution Protection Plan



November 2010



Surface Water Management Division

STORMWATER POLLUTION PREVENTION PLAN

FACILITY OPERATIONS DESCRIPTION	1
POLLUTION PREVENTION TEAM	2
FACILITY ASSESSMENT	3
MATERIALS INVENTORY	4
SITE MAP	5
IDENTIFY AREAS WITH INDUSTRIAL ACTIVITY	6
DESCRIPTION OF EXPOSED SIGNIFICANT MATERIALS	7
LIST OF SIGNIFICANT SPILLS AND LEAKS	8
NON-STORMWATER DISCHARGE DRY WEATHER ASSESSMENT & CERTIFICATION	9
MINIMUM BMP IDENTIFICATION	10
BMP IMPLEMENTATION PLAN	11
DISCHARGE MONITORING LOG / REPORTS	12
STORMWATER SYSTEM MAINTENANCE PLAN / LOG	13
EMPLOYEE TRAINING LOG / ATTENDANCE SHEETS	14
INSPECTION RECORD	15

Objectives of the SWPPP

This document serves as the Stormwater Pollution Prevention Plan (SWPPP) for a Pierce County owned, lessor/lessee, and/or operated facility.

The objectives of this SWPPP are:

- To identify locations of all materials that could cause pollution if spilled or otherwise released into the environment;
- To identify all storm sewer conveyances, treatment facilities, and discharge points to aid in the isolation of contaminants should any be spilled into the system;
- To identify locations of all spill containment equipment and materials;
- To implement and maintain best management practices (BMPs) that identify, reduce, eliminate, and/or prevent the discharge of stormwater pollutants;
- To prevent violations of State surface water quality, groundwater quality, and sediment management standards; and
- To eliminate unpermitted discharges and other illicit discharges to separate storm drainage systems;
- Provide information to staff on universal and facility-specific BMPs

This document describes the methods and procedures that Pierce County personnel will implement in order to reduce and/or the contamination of stormwater runoff and discharges of pollutants.

This SWPPP contains BMPs which target reduction or elimination of the release of pollutants into the municipal separate storm sewer system (MS4) and surface waters.

The mechanisms for such a release may include the inadvertent contamination of stormwater from illicit discharges to the MS4 or spills that reach the MS4.

This document includes the following information:

- Description of SWPPP Coordinator requirements and responsibilities
- Identification of Pollution Prevention Team personnel

- Facility description and activities
- Identification of the Pierce County Stormwater Management & Site Development Manual, August 2008 as the primary and reference document
- Description of BMPs
- Description of monitoring, inspection, and recordkeeping requirements

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

SWPPP Facility Assessment Remann Hall Facility

Worksheet #1

Completed By: Rob Dudra

Title: Assistant Municipal Stormwater Permit Coordinator

Date: 11/01/2010

Remann Hall Facility
Facilities Management Department (253-798-4532)
Site Address:1501 6th Avenue
Tacoma, WA
May 28, 2010

Emergency Contact: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998 Emergency Phone: 253-202-4180

Secondary Contact: On- Call Supervisor Title: N/A

Office Phone: N/A Emergency Phone: 253-831-0328

Business Name: Remann Hall

Juvenile Correctional Housing/Holding Facility

Start Up Date: 1968; remodeled 1994

Operating Schedule: 24 hrs/7Days

Spill Response Contractor: See DOE Hazmat Spill Contractor List (behind this page)

Entity Responsible for Stormwater System Maintenance: PC Facilities Management Department

Office Phone: 253-798-4532 Emergency Phone: 253-831-0328

NPDES Permit Number: WAR 04-4002 Effective: February 16, 2007

SWPPP Implemented: May 28, 2010 SIC Code: 7991

Pollution Prevention Team Remann Hall Facility

Worksheet #2

Completed By: Rob Dudra Title: Water Quality Specialist II

Date: 10/21/2011

Responsible Official: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998 Cell Phone: 253-202-4180

Team Leader: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998

Responsibilities: Cell Phone: 253-202-4180

Responsible for implementation of Storm Water Pollution Prevention Plan at Remann Hall Facility

Team Member: Rick Pardur Title: Facilities Management Mechanic

Office Phone: 253-798-4898

Responsibilities: Pager: 253-552-0961

Responsible for implementation of Storm Water Pollution Prevention Plan at Remann Hall Facility

Team Member: Steve Reynolds Title: Grounds Maintenance Supervisor

Office Phone: 253-798-4886

Responsibilities: Pager: 253-381-7116

Responsible for implementation of Storm Water Pollution Prevention Plan at Remann Hall Facility

Pollution Prevention Team Remann Hall Facility

Responsibilities:

Worksheet #2

Completed By: Rob Dudra

Title: Assistant Municipal Stormwater Permit Coordinator

Date: 11/01/2010

Responsible Official: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998 Cell Phone: 253-202-4180

Team Leader: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998

Responsibilities: Cell Phone: 253-202-4180

Responsible for implementation of Storm Water Pollution Prevention Plan at Remann Hall Facility

Team Member: Rick Pardur

Title: Facilities Management Mechanic

Office Phone: 253-798-4898 Pager: 253-552-0961

Responsible for implementation of Storm Water Pollution Prevention Plan at Remann Hall Facility

Hazmat Spill Contractor List

Ecology does not verify or endorse any of the contractors or information on this list. Information on this list is subject to change https://www.ecv.wa.gov/programs/spills/response/hazmatspillcontractlist.pdf

	http://www.ecv.wa.gov/pfograms/spills/response-mazmatspilloonufacilist.pdf	gov/programs/spii	is/respons	nsernazm	atspillo	ontractilst.	JO.				
LOCATION	NAME	NUMBER	Small*	Large	Mat	Organic	Cylinders	Truck	Water	Eastern	Western
	Apex Environmental	(360) 532-3590	×	×				X			×
	Evergreen Environmental Inc.	(360) 533-6141	×	×							×
nd/Walfsburg	3 Kings Environmental	(360) 666-5464	×	X	X		×		×	×	×
Bellingham	Matrix Service	(360) 676-4905	×	MΧ							×
Bellingham	Western Refinery Service	(360) 366-3303						X			×
Camas	West Coast Marine Cleaning	(360) 696-3362	×	×		×		X		×	×
lls, OR		(800) 942-4614	XW	XW	×	×	×	×	×	×	×
	Aspen Environmental, Ltd	(800) 716-3377	×	×	×			×		×	×
	Drakkar Industries	(253) 302-0014	×	×	×	×					×
Kent	Rivers Edge Services	(206) 941-1645	×	×	×			×			×
Longview/Portland/Seattle	Accord	(877) 251-8557	×	×	×	×	×	X			×
Longview	All Out Ir	(360) 414-8655	×	ΧW	×			X			×
/Astorla/Portland/Abendeen		(888) 423-6316	×	XW	×	×		×	×	×	×
Lynnwood	Environmental Quality Mingmt	(425) 673-2900	×		×	×					×
Olympia	Focus Environmental Mgt Group	(815) 621-2398					×			×	×
Porfland/Eugene/Vancouver	First Strike Environmental	(800) 447-3558	×	X	X	×		X	×	×	×
Portland/Kennewick	Oll Re-Refining Company	(800) 367-8894	×					X		×	×
Porfland/Kennewick/Spokane	Harbor Oll	(503) 285-4648	×							×	×
Puyallup	Pro-Vac	(253) 435-4328	×	×				Х		×	×
Renton	Aqua Clean Jet-N-Vac, Inc.	(800) 842-5326	×	×		×		×		×	×
Tacoma	Northwest Cascade	(253) 848-2371				×		×	×		×
Tacoma	Certified Cleaning Service	(253) 536-5500	×	MΧ	×			X		×	×
Tacoma	Guardian Industrial Services	(253) 536-0455	×	W				X		×	×
Tacoma	Emerald Services	(253) 627-4822		X	X					×	×
Tacoma	PRS Group, Inc.	(253) 383-4175	×		×			X			×
Seattle	Baker Tanks	(425) 487-6503		X	X					×	×
Seattle	Ballard Diving & Salvage	(206) 782-6750		×					×		×
Seattle/Tacoma/Vancouver	Emerald Services Inc.	(206) 832-3000	×	×	×			×		×	×
Seattle	Clean Harbors	(800) 444-4244			X					×	×
Seattle/Tacoma/Spokane/Astorla	NRC Environmental Services, Inc.	(800) 337-7455	×	XW	X		×	X	×	×	×
Seattle	Global Environmental	(206) 623-0621	×	XW					×	×	×
Seattle	Marine Vacuum Service	(206) 762-0240	×	×				X		×	×
Seattle	ONYX Enviro. Services	(206) 241-3900			×		×			×	×
	Pacific Industrial Resources	(206) 767-3957	×	X	X		×	X		×	×
Washougal	Philip Services Corporation	(800) 547-2436		X	X			X		×	×
fland	Belfor Environmental	(800) 930-0011	×	×	×	×				×	×
Snohomish	Whiteside Inc	(360) 668-8282	×	×				X			×
Spokane	Able Clean-up Technololges	(509) 466-5255	MX	XW	×	×	×		×	×	
Spokane	Big Sky Industrial	(509) 624-4949	×	X				X		×	
Vancouver/Pasco	Tidewater Environmental	(360) 695-8088		×	×					×	×
Woodinville	CADRE	(425) 883-8007					×			×	×
WAC 173-181 Approved Primary R	WAC 173-181 Approved Primary Response Contractor (all) for facilities contractor (all) for facilities	facilities.	organic	sewade,	blood, ar	Organic-sewage, blood, animal waste, et	. Je.	Re	Revised July 200	800	

Organic-sewage, blood, animal waste, etc. WAC 173-181 Approved Primary Response Contractor (oil) for facilities. Small-roadside, home tank, saddle tank, sform drains, 1 drum, etc.

erification (M-F, 8-5)

Home Heating Oil Tanks - state of Washington - Pollution Liability Insurance Agency 1-800-822-3905 - Insurance V

The Following is a List of Regional Treatment Centers for Petroleum Contaminated Soil:

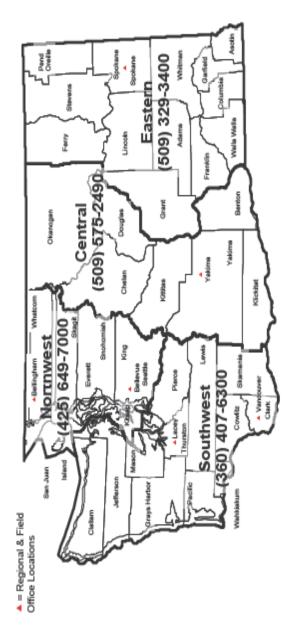
)		
CRO	Roosevelt	Roosevelt Regional Landfill	1-800-275-5641	Disposal Only
ERO	Spokane	Remtech, Inc.	(509) 624-0210	Thermal Desorption
NWRO	Everett	Rinker Materials	(425) 355-2111	Soil Remediation
NWRO	Seattle	Leforge Cement	(206) 937-8025	Cement Incorporation
SWRO	Тасопія	Petroleum Reclaiming Services	(253)383-4175	Stabilization/Disposal
SWRO	Port Angeles	Fields Shotwell Corp.	(360) 457-1417	Thermal Treatment/Recycling
SWRO	Portland OR	Waste Management	(800) 685-8001	Disposal Only
SWRO	Fife	Fife Sand & Gravel	(253) 922-7710	Bio-Remediation

SWRO: Southwest Region ERO: Eastern Region NWRO: Northwest Region KEY: CRO: Central Region

Washington State Department of Ecology Regional Office 24-Hour Oil Spill/Release Reporting Numbers

WHAT WE NEED TO KNOW

- Reporting Party
- Contact Phone(s)
- Material Released Responsible Party
- Resource Damages (e.g. dead fish)
 - Quantity
- Concentration Location
- Cleanup Status



Or call the Department of Emergency Management 24-hour Number: 1-800-258-5990 For EPA and US Coast Guard reporting, call the National Response Center: 1-800-424-8802

BC: Provincial Emergency Program (800) 663-3456 Idaho: Communications Center (208) 327-7442

Oregon: Emergency Management (503) 378-6377 EPA Region X, Seattle: (206) 553-1263

January 2010 (newised)

Stormwater Pollution Prevention

Stormwater pollution prevention is a partnership between NPDES Coordination of Pierce County Surfacewater Management (PC/SWM: 253-798-2725) and the Facility Supervisor/ SWPPP Coordinator and Facility Staff. PC/SWM will:

- Manage NPDES permit requirements (including developing, maintaining and revising the SWPPP);
- Assisting each facility with state and county regulatory issues pertaining to stormwater pollution prevention;
- Perform NPDES required inspections, semi-annually; and
- Assist in arranging stormwater pollutions training in the areas of awareness, response, BMPs, and illicit discharge recognition (IDDE).

The Facility Supervisor/ SWPPP Coordinator will:

- Ensure that each facility employee is in compliance with the Facility SWPPP regarding their operations;
- Certify the completeness and accuracy of the SWPPP by signing a certification statement.

Additionally, the Facility Supervisor/ SWPPP Coordinator will:

- Create a Pollution Prevention Team (PPT) by assigning one or more individuals by name and title to be responsible for assisting the SWPPP Coordinator;
- Establish implementation of applicable BMPs;
- Holding meetings to review the overall operation of the BMPs;
- Establishing responsibilities for inspections, on-site recordkeeping, O&M, and emergency situations; and
- Arranging the training of all team members in the operation, maintenance, and inspections of the applicable BMPs.

The Pollution Prevention Team (PPT) will:

• Assist the Facility Supervisor/ SWPPP Coordinator with his/her SWPPP responsibilites.

Pierce County Stormwater Management and Site Development Manual

Volume IV Source Control

Prepared by: Pierce County Surface Water Management

Ordinance No. 2008–59S August 2008 Effective Date: March 1, 2009

Note:

This document may be viewed in its entirety on the Pierce County Public Works and Utilities internet site in the Stormwater and Flooding Menu / Periodicals: Manuals, Plans, Reports, Studies, Regulations, and Publications

Chapter 1 - Introduction to Volume IV

What is the Purpose of this Volume?

This volume was designed to help businesses, homeowners and public agencies in Pierce County implement source control best management practices (BMPs) to prevent pollutants from contaminating stormwater runoff and entering our rivers, lakes, and streams. Human and ecosystem health, safety, and welfare can be at risk from polluted stormwater. The implementation of BMPs is required by several programs, which are listed in Section 1.2 below. Every person/business in Pierce County is required to use BMPs. You need to select BMPs from this volume to prevent stormwater pollution. Refer to Section 1.4 below for additional information on BMPs. Information on stormwater treatment BMPs can be found in Volume I, Section 1.6 and Volume V.

How Do I Know Whether Any of this Applies to Me?

Because of the provisions of the federal Clean Water Act (CWA) and Coastal Zone Management Act, the National Pollutant Discharge Elimination System (NPDES) permit, and the Puget Sound Water Quality Authority Water Quality Management Plan, the implementation of BMPs applies to all businesses, residences and public agencies in Pierce County. It includes all permanent and temporary activities at public facilities, commercial and industrial facilities, agriculture and livestock farms, and residential dwellings. Anyone involved in a particular activity, whether as an employee, supervisor, manager, landlord, tenant, or homeowner, must take part in implementing appropriate BMPs. BMPs need to be selected from this volume.

Pierce County adopted the Regional Road Maintenance – Endangered Species Act (ESA) – Program Guidelines in 2002. This document was developed by the Tri-County Road Maintenance ESA Technical Working Group and contains guidelines for roadway maintenance operations, utility maintenance, maintenance of stormwater facilities, and other right-of-way structure maintenance within the right-of-way. The goal of the program guidelines is to provide a consistent, regional program that can be used by any agency wishing to limit, reduce, or eliminate the prohibition on take of threatened species under the 4(d) rule of the ESA. There is some overlap between this document, Volume IV of the Surface Water Management Manual, source control BMPs, and the above mentioned program guidelines. The Surface Water Management Manual, Volume IV Source Control BMPs are required as the minimum standard for source controls. The Regional Road Maintenance Manual may contain additional requirements above the Surface Water Management Manual minimum standards. What Type of Pollutants are We Targeting with This Volume?

Under the NPDES permit mentioned above, the county is required to show progress in eliminating virtually all non-stormwater discharges to the stormwater drainage system. In other words, **nothing but uncontaminated stormwater**

may be discharged to the Pierce County stormwater drainage system. There are severe state and federal penalties for anyone violating the terms of these permits. Illicit discharges may be intentional or unintentional, but either way are not allowed, see Pierce County Code (PCC) Title 11.05, *Illicit Stormwater Discharges*. You must keep pollutants from leaving your property and entering the county stormwater drainage system.

Pollutants can be placed into several broad categories. The descriptions provided below are quite brief, but further information on a particular pollutant can be obtained by calling one of the information numbers listed in Chapter 7.

pН

The pH value of a substance gives you a relative measure of whether it is acidic or basic. The pH value of a body of water is vitally important, since most aquatic life can operate within a relatively narrow band of pH values (6 to 8). Some sources that can contribute to a change in pH of stormwater and water bodies are cement in concrete pouring, paving, and recycling operations; solutions from metal plating; chemicals from printing businesses and other industrial processes; and household cleaners such as bleaches and deck washes.

Total Suspended Solids

This represents particulate solids such as eroded soil, heavy metal precipitates, and biological solids (all considered as conventional pollutants), which can cause sedimentation in streams and turbidity in receiving surface waters. Sediment is the most common pollutant present in stormwater runoff. These sediments can destroy the desired habitat for fish and can impact drinking water supplies. The sediment may be carried to streams, lakes, or Puget Sound where they may be toxic to aquatic life and make dredging necessary.

Oils and Greases

Oils and greases can be either petroleum-based or food-related sources. Petroleum-based compounds can be immediately toxic to fish and wildlife, and if they reach our drinking water aquifers, will make us sick too. Food-based oils and greases may not be toxic to us, but they can coat fish gills and insects, and suffocate them.

Oxygen-Demanding Substances

Degradable organic matter, such as yard, food, and pet wastes, and some chemical wastes, can have a drastic effect on water quality if they are allowed to enter stormwater. As these substances are broken down by bacteria, the oxygen in the water is consumed. This stresses and can eventually kill fish and other creatures in the water.

Metals

Metals are utilized in many products important to our daily lives. Certain metals, known as heavy metals, wear off of our car brakes and tires, and come from the paint and moss-killing roof strips and herbicides we use at our homes. These metals can cause severe health and reproductive problems in fish and animals that live in water and sediments that become contaminated by runoff.

Bacteria and Viruses

Bacteria and viruses from pet wastes, failing septic systems and agricultural areas can contaminate drinking water and close down swimming and shellfish areas. A group of bacteria called **fecal coliform bacteria** are typically used as the indicators for pollution by more serious disease-causing microorganisms. The Washington State Department of Ecology (Ecology) is made changes to the State Water Quality Standards that include the use of new bacterial indicators: *E. coli* for fresh water and enterococci for marine water will replace fecal coliform bacteria, except that fecal coliform will still be used for marine waters that contain shellfish beds.

Nutrients

In the context of water quality, nutrients are mainly compounds of nitrogen and phosphorus. When nutrients are allowed to enter water bodies, undesirable effects such as algae overgrowth, oxygen depletion, channel clogging due to overgrowth of vegetation, and fish and animal death can occur. Sources of nutrients can include fertilizers, failing septic systems, and yard and animal wastes.

Toxic Organic Compounds

A number of organic chemicals are toxic when they get into the aquatic environment. Many pesticides, herbicides, rodenticides, and fungicides are deadly to aquatic life. The same is true of compounds such as antifreeze, wood preservatives, cleansers, and a host of other, more exotic organics derived from industries or past practices (such as polychlorinated biphenyls [PCBs], DDT, and chlordane).

Other Chemicals and Substances

There are a host of other chemicals that can cause problems if allowed to enter the aquatic environment. Common household bleach can be deadly to fish and other critters if drained directly to water bodies. Diatomaceous earth backwash from swimming pool filters can clog gills and suffocate fish. Arsenic has been used in rat and mole killing compounds. Even those compounds classified as biodegradable or environmentally friendly can have devastating immediate effects on aquatic life.

What are Best Management Practices?

BMPs are a series of actions that are designed to reduce stormwater pollution. BMPs are separated into two broad categories, namely source control BMPs and treatment BMPs.

Source Control BMPs

As the name implies, source control BMPs prevent contamination from entering stormwater runoff by controlling them at the source. There are two categories of source control BMPs: operational and structural.

- Operational source control BMPs are considered to be the most cost effective pollutant minimization practices. Operational source control BMPs are nonstructural practices that prevent or reduce pollutants from entering stormwater. They can also include process changes such as raw material/product changes and recycling wastes. Examples include:
 - o Formation of a pollution prevention team
 - Good housekeeping practices
 - o Preventive maintenance procedures
 - o Spill prevention and clean up
 - Employee training
 - o Inspections of pollutant sources
 - o Record keeping.
- 2. Structural source control BMPs are physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. Structural BMPs typically cost more to construct, operate, and maintain. Examples of structural source control BMPs typically include:
 - Enclosing and/or covering the pollutant source, i.e., within a building or other enclosure, a roof over storage and working areas, a temporary tarpaulin, etc.
 - Physically segregating the pollutant source to prevent run-on of uncontaminated stormwater
 - Devices that direct only contaminated stormwater to appropriate treatment BMPs, i.e., discharge to a
 - o sanitary sewer if a permit is first obtained from the County Industrial Pretreatment Program at (253) 798-3013.

Treatment Best Management Practices

Treatment BMPs are utilized to treat stormwater that is already contaminated. Most treatment BMPs require planning, designing, permitting and construction, and none can remove 100 percent of the contaminants in stormwater. These factors, added to the typical expense of treatment BMPs, makes source control BMPs the preferred choice. There may, however, be some instances where treatment BMPs may be required. This volume identifies specific treatment BMPs that apply to particular pollutant sources, such as fueling stations, railroad yards, storage and transfer of materials, etc. After identifying the required treatment BMPs, the reader can refer to Volume I, Section 1.6 and Volume V for additional information about treatment BMPs.

Am I Exempted if I am Already Implementing Best Management Practices?

Businesses already implementing BMPs in accordance with other federal, state, or county programs usually do not have to implement additional BMPs. Persons or businesses qualifying for exemptions include:

 Businesses required to obtain a general or individual NPDES permit for stormwater discharges must comply with the requirements of that permit. See regulatory requirement R.2 in Chapter 6 of this volume for details.

If you are on the above list, the county assumes that you are implementing the appropriate BMPs. If the county finds that you have not implemented your BMPs, or that the BMPs that you have implemented are not effectively addressing the discharge of contaminants, then you may be required to implement additional BMPs to meet requirements. *Everyone* must implement BMPs, but how each business goes about it, and through which government program, may differ from business to business.

How Do I Get Started?

If you are a landlord, tenant, or owner of a single-family residence, proceed to Chapter 3 for BMPs that are recommended for you.

If you own a business or industry, complete the worksheet in Chapter 2. If you checked off any of the activities that are being performed outdoors, use the activity code on the worksheet to find the BMPs recommended for you in Chapter 4.

If you have questions, please contact Pierce County Surface Water Management at (253) 798-2725. They can provide assistance over the phone and also at your business site.

Some Important Requirements to Note

Under current state and county law, if you own commercial property and lease or rent it, you can be held responsible for water quality problems caused by your tenants. Make sure your tenants are informed of their responsibilities under the auspices of this manual and PCC, Title 11.05, *Illicit Stormwater Discharges*.

Another important requirement is the need for an accidental spill plan if your business has the potential for a spill. If you are currently under a pretreatment permit for discharge to sewers, it will probably require a minor amount of effort to amend it to include stormwater. Please contact Pierce County Surface Water Management at (253) 798-2725 for information on developing these plans.

You are responsible for obtaining prior approval for your stormwater discharge to the county system. This means obtaining proper building and environmental permits from the county and state. Please contact the Pierce County Planning and Land Services (PALS) at (253) 798-7200 for permit information. For Ecology permits, call (360) 407-6400.

Chapter 2 - Worksheet for Commercial and Industrial Activities

This worksheet is designed for use by business and industry operators. This worksheet and the BMPs are organized by the different activities that businesses perform. The goal of the BMPs is to assure that **nothing but uncontaminated stormwater be discharged** to the Pierce County stormwater drainage system. If you perform the listed activity indoors, controlling all discharges from the activity (e.g., process water, washwater, lubricants, solvents, fugitive dust, granular material, blow down waste, etc.) such that no exposure to stormwater occurs, then you do not have to institute new BMPs for that activity. Complete the entire worksheet by checking the appropriate boxes for all activities that take place at your work place. If you checked off any of the activities **that are being performed outdoors or can reach the stormwater drainage system**, use the activity code on the worksheet to find the BMPs recommended for you in Chapter 4.

If you checked off any of these activities that are occurring indoors at your business, then you are exempt from implementing BMPs, provided no indoor drains or processes can ultimately contact stormwater or be transported to surface waters such as rivers, lakes and streams. You must ensure that liquids, powders, dusts, and fine granular materials stay confined indoors; otherwise, you will be subject to all of the BMP requirements. For discharges to the sanitary sewer, permits must be obtained from the County Industrial Pretreatment Program at (253) 798-3013.

If you checked off any of these activities as occurring outdoors at your business, then use the activity code to find the appropriate BMPs described in Chapter 4.

If you have questions, please contact Pierce County Surface Water Management at (253) 798-2725. They can provide assistance over the phone and also at your business site.

Remann Hall Facility

Activity Code	Type of Activity	Check if You Are Involved in This
A1.1	Cleaning or Washing of Tools, Engines, and Manufacturing Equipment	
	 This includes parts washers and all types of manufactured equipment components. 	
A1.2	Cleaning or Washing of Cooking Equipment	
	 This includes vents, filters, pots and pans, grills, and related items. 	
A1.3	Washing, Pressure Washing, and Steam Cleaning of Vehicles/Equipment/Building Structures	
	 This covers cleaning and washing at all types of establishments, including fleet vehicle yards, car dealerships, car washes, and maintenance facilities. 	
A1.4	Collection and Disposal of Wastewater from Mobile Interior Washing Operations	
	 This includes carpet cleaners, upholstery cleaners, and drapery cleaners. 	
A2.1	Loading and Unloading Areas for Liquid or Solid Material	
	 Loading and unloading of materials at industrial and commercial facilities. 	
A2.2	Fueling at Dedicated Stations	3.6
	 This includes gas stations, pumps at fleet vehicle yards or shops, and other privately owned pumps. 	X
A2.3	Engine Repair and Maintenance	
	This covers oil changes and other engine fluids.	
A2.4	Mobile Fueling of Vehicles and Heavy Equipment	
	Fleet fueling, wet fueling, and wet hosing.	
A3.1	Concrete and Asphalt Mixing and Production at Stationary Sites	
	 Applies to mixing of raw materials on site to produce concrete or asphalt. 	
A3.2	Concrete Pouring, Concrete Cutting, and Asphalt Application at Temporary Sites	
	 This includes construction sites, and driveway and parking lot resurfacing. 	
A3.3	Manufacturing and Post Processing of Metal Products	
	 This includes machining, grinding, soldering, cutting, welding, quenching, rinsing, etc. 	
A3.4	Wood Treatment Areas	
	 This includes wood treatment using pressure processes or by dipping or spraying. 	
A3.5	Commercial Composting	
	Includes commercial composting facilities operating outside.	

Activity Code	Type of Activity	Check if You Are Involved in This
A3.6	Landscaping and Vegetation Management Activities, Including Vegetation Removal, Herbicide and Insecticide Application, Fertilizer Application, Irrigation, Watering, Gardening, and Lawn Care	x
	 Includes businesses involved in landscaping, applying pesticides and managing vegetation. 	
A3.7	Painting, Finishing, and Coating of Vehicles, Boats, Buildings, and Equipment	
	 Includes surface preparation and the applications of paints, finishes, and/or coatings. 	
A3.8	Commercial Printing Operations	
	Includes materials used in the printing process.	
A3.9	Manufacturing Activities – Outside	
	Includes outdoor manufacturing areas.	
A3.10	Agricultural Crop Production	
1011	Includes commercial scale farming.	
A3.11	Application of Pesticides, Herbicides, Fungicides and Rodenticides for purposes other than landscaping	
	Includes moss removal and outdoor insect extermination.	
A4.1	Storage or Transfer (Outside) of Solid Raw Materials, By-products, or	
714.1	Finished Products	X
A4.2	Storage and Treatment of Contaminated Soils	
	 This applies to contaminated soils that are excavated and left on site. 	
A4.3	Temporary Storage or Processing of Fruits or Vegetables	
	 This includes processing activities at wineries, fresh and frozen juice makers, and other food and beverage processing operations. 	
A4.4	Storage of Solid Wastes and Food Wastes	
	 This includes regular garbage and all other discarded non-liquid items. 	X
A4.5	Recyclers and Scrap Yards	
	 This includes scrapped equipment, vehicles, empty metal drums, and assorted recyclables. 	X
A4.6	Treatment, Storage, or Disposal of Dangerous Wastes	
	 Refer to Ecology and the Tacoma-Pierce County Health Department for more information, see Chapter 6. 	
A4.7	Storage of Liquid, Food Waste, or Dangerous Waste Containers	
	 This includes containers located outside a building and used for temporary storage. 	
A4.8	Storage of Liquids in Permanent Aboveground Tanks	
	 Includes all liquids in aboveground tanks. 	X
A4.9	Parking and Storage for Vehicles and Equipment • Includes public and commercial parking lots	X
A4.10	Storage of Pesticides, Fertilizers, or other products that can leach pollutants.	
A5.1	Demolition of Buildings	
	 Applies to removal of existing buildings and subsequent clearing of the rubble. 	

Activity Code	Type of Activity	Check if You Are Involved in This
A5.2	 Building Repair, Remodeling, and Construction Applies to construction of buildings, general exterior building repair work and remodeling of buildings. 	
A6.1	Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots	
A6.2	Dust Control at Manufacturing Sites	
	 Includes grain dust, sawdust, coal, gravel, crushed rock, cement, and boiler fly ash. 	
A6.3	Soil Erosion and Sediment Control (ESC) at Industrial Sites	
	Includes industrial activities that take place on soil.	
A7.1	Commercial Animal Handling Areas	
	 This includes kennels, fenced pens, veterinarians, and businesses that board animals. 	
A7.2	Keeping Livestock in Stables, Pens, Pastures or Fields	
	Applies to all types of livestock.	
A7.3	Log Sorting and Handling	
	 Applies to log yards typically located at sawmills, ports, and pulp mills. 	
A7.4	Boat building, Mooring, Maintenance, and Repair	
	 This includes all types of maintenance, repair, and building operations. 	
A7.5	Logging	
	 Applies to logging activities that fall under Class IV general forest practices. 	
A7.6	Mining and Quarrying of Sand, Gravel, Rock, Minerals, Peat, Clay, and Other Materials	
	 This does not include excavation at construction sites. 	
A7.7	Swimming Pool and Spa Cleaning and Maintenance This includes every swimming pool and spa not at a single family residence. Commercial pool cleaners are included here for all pools.	
A7.8	De-icing and Anti-icing Operations for Airports and Streets	
	 Includes aircraft, runways/taxiways, streets and highways. 	
A7.9	Roof and Building Drains at Manufacturing and Commercial Buildings	
	 These sites will be referred to the Puget Sound Clean Air Agency. 	X
A7.10	Urban Streets	
	 Includes recommended BMPs. 	
A7.11	Railroad Yards	
A7.12	Maintenance of Public and Private Utility Corridors and Facilities	1
	 Includes public and private utility maintenance activities. 	
A7.13	Maintenance of Roadside Ditches	
A7.14	Maintenance of Stormwater Drainage and Treatment Facilities	
A7.15	Spills of Oil and Hazardous Substances	

Activity Code	Type of Activity	Check if You Are Involved in This

Site assessment performed by Clarence Johnson and Corrie Smith, Pierce County Surface Water Management on 10/06/10.

Material Inventory

Remann Hall Facility

Worksheet #3 Completed By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 11/01/2010

spills or leaks of pollutants have occurred during the three years prior to the effective date of the permit. (Include any pollutants no longer handled on-site.) List materials handled, treated, stored, or disposed of at the site that may potentially be exposed to precipitation or runoff. Also indicate if any

Past Spill?	No	No	No	No	No	No	No	No	24
Likelihood of Contact with Stormwater? (If yes, describe reason)	No	No	No	No	No	No	No	No	
Exposed?	Yes Outdoor, Above Ground Tank	Yes Outdoor, Above Ground Tank	Yes	Yes	Yes	Yes	Хes	Yes	
Quantity Stored (gal./ lb.)	1,250 gal	750 gal	(2) 10 yard covered dumpsters	20yard screened dumpster	Moderate Amt: Galv.fencing; Small Amt: wood	Small Amt. on Ground	(3) 50 gal. metal drums	10 yard Compactor	
Location	Outside (see Site Maps/ Tab #5)	Outside (see Site Maps/ Tab #5)	Outside (see Site Maps/ Tab #5)	Outside (see Site Maps/ Tab #5)	Outside (see Site Maps/ Tab #5)	Outside (see Site Maps/ Tab #5)	Outside (see Site Maps/ Tab #5)	Outside (see Site Maps/ Tab #5)	
Material	Diesel Fuel	Gasoline Fuel	Commercial/Household Refuse	Recyclables- Cardboard	Construction Materials	Recyclables- Scrap Metal	Recyclables- Used Kitchen Grease/Oil	Compacted Refuse	

Worksheet #4 Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 05/28/2010 Remann Hall Facility Site Map(s)

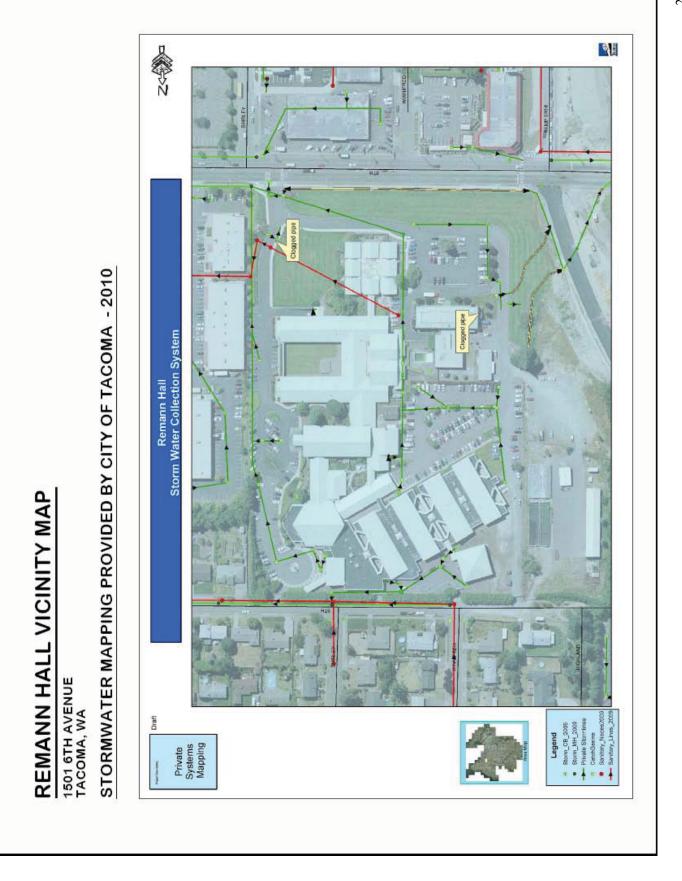
(ADD SITE MAP(S) BEHIND THIS SHEET)

REMANN HALL OUTFALL IDENTIFICATION MAP - 2010

1501 6TH AVENUE TACOMA, WA







REMANN HALL SITE MAP

(REVISED 10-21-2011 BY R. DUDRA)

1501 6TH AVENUE TACOMA, WA

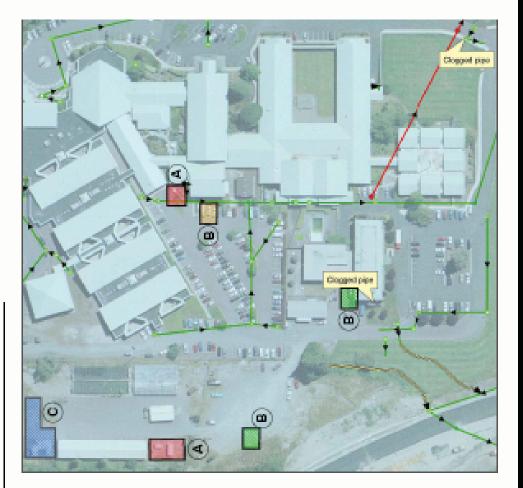
AREAS ASSOCIATED WITH INDUSTRIAL ACTIVITY - 2010

- A FUEL STORAGE
- B REFUSE STORAGE AREA
- © BULK & CONSTRUCTION MATERIALS STORAGE AREA





STORMWATER MAPPING PROVIDED BY CITY OF TACOMA

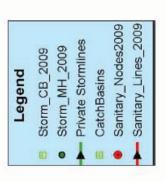


REMANN HALL SITE MAP

1501 6TH AVENUE TACOMA, WA

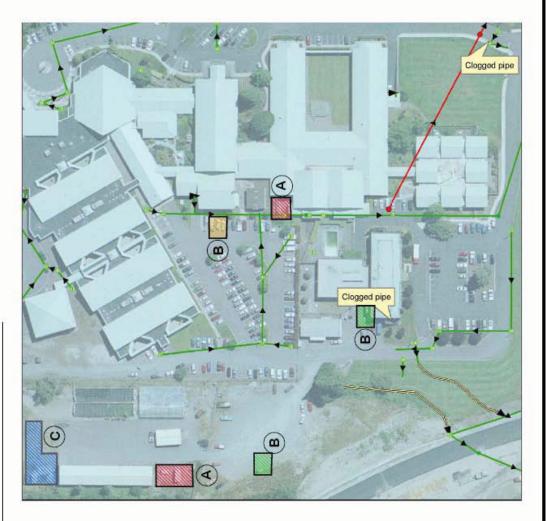
AREAS ASSOCIATED WITH INDUSTRIAL ACTIVITY - 2010

- A FUEL STORAGE
- (B) REFUSE STORAGE AREA
- © BULK & CONSTRUCTION MATERIALS STORAGE AREA





STORMWATER
MAPPING PROVIDED
BY CITY OF TACOMA



Identify Areas Associated With Industrial Activity	Worksheet #5 Provided By: Rob Dudra
Remann Hall Facility	Title: Assistant Municipal Stormwater Permit Coordinator Date: 04-08-2010

List areas and activities which may be sources of pollution. Indicate by letter reference (i.e. A,B,C...) on Site Map (contents of Worksheet #4.) Provide the potential of these areas and activities as pollutant sources identifying any pollutant that may be generated by that activity.

Industrial Area or Activity	Potential Stormwater Pollutant from Area or	Likelihood of Being Present in your Stormwater
	Activity	Discharge? (If yes, describe reason)
A. Fuel Storage	Diesel / Gasoline (spill containment products	No
	proximal)	
B. Refuse Storage Area	Leachate from Refuse (covered dumpster)	No
C. Bulk & Construction Materials Storage Area	Turdity/ Zinc particulate from exposure to	No
	precipitation	

Description of Exposed Significant Material

Remann Hall Facility

Worksheet #6 Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 11-01-2010

Based on your material inventory, list significant materials that have been exposed since November 18,1989, and/or are currently exposed.

List of Exposed Significant Materials	Period of Exposure	Quantity Exposed* (gal./lb.)	Location	Method of Storage, Handling, Treatment or Disposal
Diesel Fuel	constant	1,250 gal	Outside (see Site Maps/ Tab #5)	Secured area; double-walled containment, above-ground tank; commercial delivery, tank maintenance; spill containment materials proximal.
Gasoline Fuel	constant	750 gal	Outside (see Site Maps/ Tab #5)	Secured area; double-walled containment, above-ground tank; commercial delivery, tank maintenance; spill containment materials proximal.
Commercial/Household Refuse	constant	(2) 10 yard covered dumpsters	Outside (see Site Maps/ Tab #5)	Secured area; closed lid commercial dumpster/ service
Recyclables- Cardboard	constant	20yard screened dumpster	Outside (see Site Maps/ Tab #5)	Secured area; closed, wire-gridlid commercial dumpster/ service
Construction Materials	constant	Moderate Amt: Galv.fencing; Small Amt: wood	Outside (see Site Maps/ Tab #5)	Ground contact; exposed to weather
Recyclables- Scrap Metal	constant	Small Amt. on Ground	Outside (see Site Maps/ Tab #5)	Ground contact; exposed to weather
Recyclables- Used Kitchen Grease/Oil	constant	(3) 50 gal. metal drums	Outside (see Site Maps/ Tab #5)	Metal drums with lids & rings on wood pallet; commercial recycling
Compacted Refuse	constant	10 yard Compactor	Outside (see Site Maps/ Tab #5)	Commercial compacter/service

Worksheet #7 Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 11-01-2010	Response Procedure	Amount of Material no MaterialMaterial longerPreventive Measure TakenRecovered exposed?exposed?(gals/lbs) (yes/no)exposed?	n/a n/a			
Works Provid Title: , Date:	Re	Spill/ leak Material Recovered (gals/lbs)	n/a			
		Source, If Res	n/a n/a			
ks	Description	Quantity (gal./lb.)	n/a			
List of Significant Spills and Leaks Remann Hall Facility		Type of Material	n/a			
List of Significant Spil Remann Hall Facility	Location		None			
List of Si Remann		Date MM/DD/YY	10/06/2010			

of three years prior to the effective date of this Permit. Significant spills and leaks include but are not limited to, release of List all spills and leaks (as indicated on Worksheet #3) of toxic or hazardous pollutants that were significant after the date oil or hazardous substances in excess of reportable quantities. Although not required, we suggest you list spills and leaks of non-hazardous materials. Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 11-01-2010

Inspections (refer to Tab 12)

Remann Hall Facility

Non-Stormwater Discharge	Worksheet #9
	Provided By: Rob Dudra
Dry weather (May 1 to September 30)	Title: Assistant Municipal Stormwater Permit Coordinator
Assessment & Certification	Date: 11-01-2010
Remann Hall Facility	

Tests may include: visual observation of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

he							l,		
Person who conducted the test							ion, the information bmitting false information		
Identify potential significant sources							ponsible for gathering the informati there are significant penalties for su	B. Phone:	D. Date Signed
Describe results from test for presence of non-stormwater discharge						CERTIFICATION	Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information, submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		
Method used to test or evaluate discharge							Based on my inquiry of the person or persons who manage the systems or submitted is, to the best of my knowledge and belief, true, accurate, and concluding the possibility of fine and imprisonment for knowing violations.		
Discharge Location							y inquiry of the person o, to the best of my know e possibility of fine and i	nd Title	o.
Date							Based on my submitted is including the	A. Name and Title	C. Signature

Applicable Identified BMPs

Remann Hall Facility

From: PC Stormwater & Site Development Manual 2008 Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 04-08-2010

(INDIVIDUAL BMPs BEHIND THIS SHEET)

A2.2 Fueling at Dedicated Stations

Description of Pollutant Sources: A fueling station is a facility dedicated to the transfer of fuels from a stationary pumping station to mobile vehicles or equipment. It includes above or under-ground fuel storage facilities. In addition to general service gas stations, fueling may also occur at 24-hour convenience stores, construction sites, warehouses, car washes, manufacturing establishments, port facilities, and businesses with fleet vehicles. Typically, stormwater contamination at fueling stations is caused by leaks/spills of fuels, lube oils, radiator coolants, and vehicle washwater.

Pollutant Control Approach: New or substantially remodeled fueling stations must be constructed on an impervious concrete pad under a roof to keep out rainfall and stormwater run-on. Substantial remodeling includes replacing the canopy or relocating or adding one or more fuel dispensers in such a way that the Portland cement concrete (or equivalent) paving in the fueling area is modified. A treatment BMP must be used for contaminated stormwater and wastewaters in the fueling containment area.

Required BMPs

For New or Substantially Remodeled Fueling Stations:

- Prepare an emergency spill response and cleanup plan (per BMP A7.14 Spills of Oil and Hazardous Substances) and have designated trained person(s) available either on site or on call at all times to promptly and properly implement that plan and immediately cleanup all spills. Keep suitable cleanup materials, such as dry adsorbent materials, on site to allow prompt cleanup of a spill.
- Train employees on the proper use of fuel dispensers. Post signs in accordance with the Uniform Fire Code. Post "No Topping Off" signs (topping off gas tanks causes spillage and vents gas fumes to the air). Make sure that the automatic shut off on the fuel nozzle is functioning properly.
- The person conducting the fuel transfer must be present at the fueling pump during fuel transfer, particularly at unattended or self-serve stations.
- Keep drained oil filters in a suitable container or drum.
- Design the fueling island to control spills (dead-end sump or spill control separator in compliance with the Uniform Fire Code) and to treat collected stormwater and/or wastewater to required levels. Slope the concrete containment pad around the fueling island toward drains: trench drains, catch basins, and/or a dead-end sump. The slope of the drains shall not be less than 1 percent (Section 7901.8 of the Uniform Fire Code). Drains to

treatment shall have a shutoff valve, which must be closed in the event of a spill. The spill control sump must be sized in compliance with Section 7901.8 of the Uniform Fire Code.

OR

- Design the fueling island as a spill containment pad with a sill or berm raised to a minimum of 4 inches (Section 7901.8 of the Uniform Fire Code) to prevent the runoff of spilled liquids and to prevent run-on of stormwater from the surrounding area. Raised sills are not required at the open-grate trenches that connect to an approved drainage-control system.
- The fueling pad must be paved with Portland cement concrete, or equivalent. Asphalt is not considered an equivalent material.
- The fueling island must have a roof or canopy to prevent the direct entry of precipitation onto the spill containment pad (Figure 4.7). The roof or canopy should, at a minimum, cover the spill containment pad (within the grade break or fuel dispensing area) and preferably extend several additional feet to reduce the introduction of windblown rain. Convey all roof drains to storm drains outside the fueling containment area.



(Photo courtesy of Austin Mowhawk and Company, Inc.)

Figure 4.7. Roof at Fueling Island to Prevent Stormwater Runon.

• Stormwater collected on the fuel island containment pad must be conveyed to a sanitary sewer system, if approved by Pierce County, Industrial Pretreatment Program at (253) 798-3013; or to an approved treatment system such as an oil/water separator and a basic treatment BMP (basic treatment BMPs are listed in Volume V and include media filters and biofilters). Discharges from treatment systems to storm drains or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain greater than a significant amount of oil and grease.

- Alternatively, stormwater collected on the fuel island containment pad may be collected and held for proper offsite disposal.
- Conveyance of any fuel-contaminated stormwater to a sanitary sewer must be approved by Pierce County and must comply with pretreatment regulations (WAC 173-216-060). Contact the Industrial Pretreatment Program at (253) 798-3013.
- Transfer the fuel from the delivery tank trucks to the fuel storage tank in impervious contained areas and ensure that appropriate overflow protection is used. Alternatively, cover nearby storm drains during the filling process and use drip pans under all hose connections.

Additional BMP for Vehicles 10 Feet in Height or Greater:

A roof or canopy may not be practicable at fueling stations that regularly fuel vehicles that are 10 feet in height or greater, particularly at industrial or WSDOT sites. At those types of fueling facilities, the following BMPs apply, as well as all of the other required BMPs and fire prevention Uniform Fire Code requirements.

• If a roof or canopy is impractical, the concrete fueling pad must be equipped with emergency spill control, which includes a shutoff valve for the drainage from the fueling area. The valve must be closed in the event of a spill. An electronically actuated valve is preferred to minimize the time lapse between spill and containment. Spills must be cleaned up and disposed of off site in accordance with BMP A7.14 Spills of Oil and Hazardous Substances.

The valve may be opened to convey contaminated stormwater to a sanitary sewer, if approved by Pierce County (Industrial Pretreatment Program at (253) 798-3013), or to oil removal treatment such as an American Petroleum Institude (API) or coalescent plate oil/water separator, or equivalent treatment, and then to a basic treatment BMP. See Volume V for more information. Discharges from treatment systems to storm drains or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain greater than a

A3.6 Landscaping and Lawn/Vegetation Management

Description of Pollutant Sources: Landscaping can include grading, soil transfer, vegetation removal, pesticide and fertilizer application, and watering. Stormwater contaminants include toxic organic compounds, heavy metals, oils, total suspended solids, coliform bacteria, fertilizers, and pesticides.

Lawn and vegetation management can include control of objectionable weeds, insects, mold, bacteria, and other pests with chemical pesticides and is conducted commercially at commercial, industrial, and residential sites. Examples include weed control on golf course lawns, access roads, and utility corridors and during landscaping; sap stain and insect control on lumber and logs; rooftop moss removal; killing nuisance rodents; fungicide application to patio decks; and residential lawn/plant care. Toxic pesticides such as pentachlorophenol, carbamates, and organometallics can be released to the environment by leaching and dripping from treated parts, container leaks, product misuse, and outside storage of pesticide contaminated materials and equipment. Poor management of the vegetation and poor application of pesticides or fertilizers can cause appreciable stormwater contamination.

Pollutant Control Approach: Control of fertilizer and pesticide applications, soil erosion, and site debris to prevent contamination of stormwater.

Develop and implement an integrated pest management plan and use pesticides only as a last resort. Refer to Appendix IV-B Example of an Integrated Pest Management Program for more information. If pesticides/herbicides are used they must be carefully applied in accordance with label instructions on U.S. EPA registered materials. Maintain appropriate vegetation, with proper fertilizer application where practicable, to control erosion and the discharge of stormwater pollutants. Where practicable, grow plant species appropriate for the site, or adjust the soil properties of the subject site to grow desired plant species.

Required BMPs for Landscaping

- Do not dispose of collected vegetation into waterways or stormwater drainage systems.
- Use mulch or other erosion control measures when soils are exposed for more than 1 week during the dry season or 2 days during the rainy season.
- If oil or other chemicals are handled, store and maintain appropriate oil and chemical spill cleanup materials in readily accessible locations.

 Ensure that employees are familiar with proper spill cleanup procedures.

Suggested BMPs for Landscaping

- Conduct mulch-mowing whenever practicable.
- Install engineered soil/landscape systems to improve the infiltration and regulation of stormwater in landscaped areas.

- Dispose of grass clippings, leaves, sticks, or other collected vegetation by composting, if feasible.
- Till fertilizers into the soil rather than dumping or broadcasting onto the surface. Determine the proper fertilizer application for the types of soil and vegetation encountered.
- Till a topsoil mix or composted organic material into the soil to create a
 well-mixed transition layer that encourages deeper root systems and
 drought-resistant plants.
- Use manual and/or mechanical methods of vegetation removal rather than applying herbicides, where practical.

Required BMPs for the Use of Pesticides

- Develop and implement an IPM plan (see section on integrated pest management below) and use pesticides only as a last resort.
- Implement a pesticide-use plan and include at a minimum: a list of selected pesticides and their specific uses; brands, formulations, application methods, and quantities to be used; equipment use and maintenance procedures; safety, storage, and disposal methods; and monitoring, record keeping, and public notice procedures. All procedures shall conform to the requirements of Chapter 17.21 Revised Code of Washington (RCW) and Chapter 16-228 WAC.
- Choose the least toxic pesticide available that is capable of reducing the infestation to acceptable levels. The pesticide should readily degrade in the environment and/or have properties that strongly bind it to the soil. Any pest control used should be conducted at the life stage when the pest is most vulnerable. For example, if it is necessary to use a Bacillus thuringiensis application to control tent caterpillars, it must be applied before the caterpillars cocoon or it will be ineffective. Any method used should be site-specific and not used wholesale over a wide area.
- Apply the pesticide according to label directions. Under no conditions shall pesticides be applied in quantities that exceed manufacturer's instructions.
- Mix the pesticides and clean the application equipment in an area where accidental spills will not enter surface or groundwater, and will not contaminate the soil.
- Store pesticides in enclosed areas or in covered impervious containment. Ensure that pesticide contaminated stormwater or spills/leaks of pesticides are not discharged to storm drains. Do not hose down paved areas to a

- storm drain or conveyance ditch. Store and maintain appropriate spill cleanup materials in a location known to all near the storage area.
- Cleanup any spilled pesticides and ensure that the pesticide contaminated waste materials are kept in designated covered and contained areas.
- The pesticide application equipment must be capable of immediate shutoff in the event of an emergency.
- Do not spray pesticides within 100 feet of open waters including wetlands; ponds; and streams, sloughs, and any drainage ditch or channel that leads to open water, except when approved by Ecology or by Pierce County. All sensitive areas including wells, creeks, and wetlands must be flagged prior to spraying.
- As required by Pierce County or by Ecology, complete public posting of the area to be sprayed prior to the application.
- Spray applications should only be conducted during weather conditions as specified in the label direction and applicable local and state regulations.
 Do not apply during rain or immediately before expected rain.

Suggested BMPs for the Use of Pesticides

- Consider alternatives to the use of pesticides such as covering or harvesting weeds, substitute vegetative growth, and manual weed control/moss removal.
- Consider the use of soil amendments, such as compost, that are known to control some common diseases in plants, such as Pythium root rot, ashy stem blight, and parasitic nematodes. The following are three possible mechanisms for disease control by compost addition (USEPA publication 530-F-9-044):
 - o Successful competition for nutrients by antibiotic production
 - Successful predation against pathogens by beneficial microorganism;
 and
 - Activation of disease-resistant genes in plants by composts.

Installing an amended soil/landscape system can preserve both the plant system and the soil system more effectively. This type of approach provides a soil/landscape system with adequate depth, permeability, and organic matter to sustain itself and continue working as an effective stormwater infiltration system and a sustainable nutrient cycle.

• Once a pesticide is applied, its effectiveness should be evaluated for possible improvement. Records should be kept showing the applicability and inapplicability of the pesticides considered.

- An annual evaluation procedure should be developed including a review of the effectiveness of pesticide applications, impact on buffers and sensitive areas (including potable wells), public concerns, and recent toxicological information on pesticides used/proposed for use. If individual or public potable wells are located in the proximity of commercial pesticide applications, contact the regional Ecology hydrogeologist to determine if additional pesticide application control measures are necessary.
- Rinsate from equipment cleaning and/or triple-rinsing of pesticide containers should be used as product or recycled into product.

For more information, contact the WSU Extension Home-Assist Program at (253) 445-4556; Bio-Integral Resource Center (BIRC), P.O. Box 7414, Berkeley, CA 94707; or Ecology to obtain "Hazardous Waste Pesticides" (publication No. 89-41); contact U.S. EPA to obtain a publication entitled "Suspended, Canceled and Restricted Pesticides" which lists all restricted pesticides and the specific uses that are allowed. Valuable information from these sources may also be available on the Internet.

Suggested BMPs for Vegetation Management

- Use at least an 8-inch "topsoil" layer with at least 8 percent organic matter to provide a sufficient vegetation-growing medium. Amending existing landscapes and turf systems by increasing the percent organic matter and depth of topsoil can substantially improve the permeability of the soil, improve the disease and drought resistance of the vegetation, and reduce fertilizer demand. This reduces the demand for fertilizers, herbicides, and pesticides. Organic matter is the least water-soluble form of nutrients that can be added to the soil. Composted organic matter generally releases only between 2 and 10 percent of its total nitrogen annually, and this release corresponds closely to the plant growth cycle. If natural plant debris and mulch are returned to the soil, this system can continue recycling nutrients indefinitely.
- Select the appropriate turfgrass mixture for your climate and soil type. Certain tall fescues and rye grasses resist insect attack because the symbiotic endophytic fungi found naturally in their tissues repel or kill common leaf and stem-eating lawn insects. They do not, however, repel root-feeding lawn pests such as Crane Fly larvae, and are toxic to ruminants such as cattle and sheep. The fungus causes no known adverse effects to the host plant or to humans. Endophytic grasses are commercially available and can be used in areas such as parks or golf courses where grazing does not occur. The local Cooperative Extension office can offer advice on which types of grass are best suited to the area and soil type.

- Use the following seeding and planting BMPs, or equivalent BMPs, to obtain information on grass mixtures, temporary and permanent seeding procedures, maintenance of a recently planted area, and fertilizer application rates: Temporary Seeding, Mulching, and Matting; Clear Plastic Covering; Permanent Seeding and Planting; and Sodding as described in Volume II, Construction Stormwater Pollution Prevention.
- Selection of desired plant species can be made by adjusting the soil properties of the subject site. For example, a constructed wetland can be designed to resist the invasion of reed canary grass by layering specific strata of organic matters (e.g., compost forest product residuals) and creating a mildly acidic pH and carbon-rich soil medium. Consult a soil restoration specialist for site-specific conditions.
- Aerate lawns regularly in areas of heavy use, where the soil tends to become compacted. Aeration should be conducted while the grasses in the lawn are growing most vigorously. Remove layers of thatch greater than 3/4-inch deep.
- Mowing is a stress-creating activity for turfgrass. When grass is mowed too short, its productivity is decreased and there is less growth of roots and rhizomes. The turf becomes less tolerant of environmental stresses, more disease prone, and more reliant on outside means such as pesticides, fertilizers, and irrigation to remain healthy. Set the mowing height at the highest acceptable level and mow at times and intervals designed to minimize stress on the turf. Generally mowing only one-third of the grass blade height will prevent stressing the turf.

Suggested BMPs for Irrigation

• The depth from which a plant normally extracts water depends on the rooting depth of the plant. Appropriately irrigated lawn grasses normally root in the top 6 to 12 inches of soil; lawns irrigated on a daily basis often root only in the top 1 inch of soil. Improper irrigation can encourage pest problems, leach nutrients, and make a lawn completely dependent on artificial watering. The amount of water applied depends on the normal rooting depth of the turfgrass species used, the available water holding capacity of the soil, and the efficiency of the irrigation system. Consult with Tacoma Water, the Pierce Conservation District, or Cooperative Extension office to help determine optimum irrigation practices.

Suggested BMPs for Fertilizer Management

• Turfgrass is most responsive to nitrogen fertilization, followed by potassium and phosphorus. Fertilization needs vary by site depending on plant, soil, and climatic conditions. Evaluation of soil nutrient levels through regular testing ensures the best possible efficiency and economy

- of fertilization. For details on soils testing, contact the Pierce Conservation District or Cooperative Extension Service.
- Fertilizers should be applied in amounts appropriate for the target vegetation and at the time of year that minimizes losses to surface and groundwater. Do not fertilize during a drought or when the soil is dry. Alternatively, do not apply fertilizers within 3 days prior to predicted rainfall. The longer the period between fertilizer application and either rainfall or irrigation, the less fertilizer runoff occurs.
- Use slow release fertilizers such as methylene urea, IDBU, or resin coated fertilizers when appropriate, generally in the spring. Use of slow release fertilizers is especially important in areas with sandy or gravelly soils.
- Time the fertilizer application to periods of maximum plant uptake.

 Generally fall and spring applications are recommended, although WSU turf specialists recommend four fertilizer applications per year.

Properly trained persons should apply all fertilizers. At commercial and industrial facilities, fertilizers should not be applied to grass swales, filter strips, or buffer areas that drain to sensitive water bodies unless approved by the County.

Suggested BMPs for IPM

An integrated pest management program might consist of the following steps:

- Step 1 Correctly identify problem pests and understand their life cycle.
- Step 2 Establish tolerance thresholds for pests.
- Step 3 Monitor to detect and prevent pest problems.
- Step 4 Modify the maintenance program to promote healthy plants and discourage pests.
- Step 5 Use cultural, physical, mechanical, or biological controls first if pests exceed the tolerance thresholds.
- Step 6 Evaluate and record the effectiveness of the control and modify maintenance practices to support lawn or landscape recovery and prevent recurrence.

For an elaboration of these steps refer to Appendix IV-B, Example of an IPM Program.

A3.11 Application of Pesticides, Herbicides, Fungicides, and Rodenticides for Purposes Other than Landscaping

This activity applies to businesses and government agencies using pesticides, herbicides, fungicides and rodenticides for purposes such as removing moss from rooftops or decks, killing nuisance rodents and some insects (such as termites and carpenter ants) that live outdoors but can invade the home if left unchecked. Businesses and government agencies involved in these activities must comply with Tacoma-Pierce County Health Department regulations and Washington State Department of Agriculture pesticide regulations. See Chapter 6 for more information on these regulations. The BMPs listed are intended to complement other regulations. Application of pesticides for landscaping purposes must follow the BMPs discussed under A3.6 Landscaping and Lawn/Vegetation Management.

Pollutants of Concern: Toxic organic compounds, oils, heavy metals, Chemical oxygen demand (COD)

Required BMPs

The following BMPs or equivalent measures are required of all businesses and agencies applying pesticides, herbicides, fungicides and rodenticides for non-landscaping purposes:

- Proper application practices must be used to avoid excessive application. Follow the manufacturers' guidelines and directions carefully.
- Never apply pesticides, herbicides, fungicides or rodenticides when rain is expected, or during rain events.
- Do not apply chemicals when it is windy. Early morning is typically the calmest time of day.
- Employees must be educated regarding the pollution potential of misusing the chemicals they are working with.
- Manage residues properly. Triple rinse or pressure rinse empty containers and mixing and application equipment. Collect all rinse water, and use it for diluting the next batch.

Suggested BMPs

• Use manual pest control measures, such as scraping or using high-pressure sprayers to remove moss from roofs and decks, before resorting to chemicals. Rodent traps can also be highly effective, without endangering pets and children as chemical baits can.

• IPM is a comprehensive approach to the use of pesticides. Integrated pest management minimizes pesticide application and stresses selection of proper products and tailored application rates. It is a sensible long-term strategy rather than a hit-and-run operation, and as such is probably the most effective BMP measure that can be utilized under this activity. See BMP S.8 in Chapter 5 for more details on integrated pest management and in Appendix IV-B for an example.

A4.1 Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products

Description of Pollutant Sources: Solid raw materials, by-products, or products such as gravel, sand, salts, topsoil, compost, logs, sawdust, wood chips, lumber and other building materials, concrete, and metal products sometimes are typically stored outside in large piles, stacks, etc. at commercial or industrial establishments. Bulk materials stored outside may leach or erode when contacted by stormwater. Contaminants include total suspended solids, BOD, organics, and dissolved salts (sodium, calcium, magnesium chloride, etc).

Pollutant Control Approach: Provide impervious containment with berms, dikes, etc. and/or cover to prevent run-on and discharge of leachate pollutant(s) and total suspended solids.

Required BMPs

- Do not hose down the contained stockpile area to a storm drain or a conveyance to a storm drain or receiving water.
- Choose one or more of the source control BMP options listed below for stockpiles greater than 5 cubic yards of erodible or water soluble materials such as soil, road de-icing salts, compost, unwashed sand and gravel, sawdust, etc. Also included are outside storage areas for solid materials such as logs, bark, lumber, metal products, etc.:
 - Store in a building or paved and bermed covered area as shown in Figure 4.12
 - Place temporary plastic sheeting (polyethylene, polypropylene, hypalon, or equivalent) over the material (Figure 4.13); or
 - Pave the area and install a stormwater drainage system. Place curbs or berms along the perimeter of the area to prevent the run-on of uncontaminated stormwater and to collect and convey runoff to treatment. Slope the paved area in a manner that minimizes the contact between stormwater (e.g., pooling) and leachable materials in compost, logs, bark, wood chips, etc.
- For large stockpiles that cannot be covered, implement containment practices at the perimeter of the site and at any catch basins as needed to prevent erosion and discharge of the stockpiled material offsite or to a storm drain. Ensure that contaminated stormwater is not discharged directly to catch basins without being conveyed through a treatment BMP.



Figure 4.12. Covered and Secured Storage Area for Bulk Solids.



Figure 4.13. Temporary Plastic Sheeting Anchored over Raw Materials Stored Outdoors.

• Convey contaminated stormwater from the stockpile area to a wet pond, wet vault, settling basin, media filter, or other appropriate treatment system, depending on the contamination.

Suggested BMPs

• Maintain drainage areas in and around storage of solid materials with a minimum slope of 1.5 percent to prevent pooling and minimize leachate formation. Areas should be sloped to drain stormwater to the perimeter

- where it can be collected, or to internal drainage "alleyways" where material is not stockpiled.
- Sweep paved storage areas regularly for collection and disposal of loose solid materials.
- If and when feasible, collect and recycle water-soluble materials (leachates) to the stockpile.
- Stock cleanup materials such as brooms, dustpans, and vacuum sweepers near the storage area.

A4.5 Recyclers and Scrap Yards

Description of Pollutant Sources This activity applies to businesses and public agencies that salvage and store scrap metal, scrap equipment, junk appliances and vehicles, empty metal drums, and recyclable items such as cans, bottles, paper products construction materials, metals, and beverage containers. This does not apply to businesses and agencies that store these items for less than 2 weeks. Businesses engaged in these activities may be required to obtain an NPDES permit for stormwater discharges from Ecology. See the discussion of NPDES requirements in Chapter 6 for more information. For these permit holders, the BMPs listed below should be used to complement NPDES requirements.

Potential sources of pollutants include paper, plastic, metal scrap debris, engines, transmissions, radiators, batteries, and other materials that contain fluids or are contaminated with fluids. Other pollutant sources include leachate from metal components, contaminated soil, and the erosion of soil. Activities that can generate pollutants include the transfer, dismantling, and crushing of vehicles and scrap metal; the transfer and removal of fluids; maintenance and cleaning of vehicles, parts, and equipment; and storage of fluids, parts for resale, solid wastes, scrap parts, and materials, equipment and vehicles that contain fluids, generally in uncovered areas.

Potential pollutants typically found at these facilities include: toxic hydrocarbons, polychlorinated biphenyls (PCBs), other toxic organic compounds, heavy metals, oils and greases, suspended solids, Biochemical oxygen demand (BOD), Chemical oxygen demand (COD), ethylene and propylene glycol, and acidic pH.

Required BMPs

For facilities subject to Ecology's industrial stormwater general permit refer to BMP Guidance Document No. 94-146, "Best Management Practices to Prevent Stormwater Pollution at Vehicle Recycler Facilities," Ecology, September 1994 for selection of BMPs. The BMPs in that guidance document can also be applied to scrap material recycling facilities (depending on the pollutant sources existing at those facilities) and to non-permitted facilities.

- Gasoline, engine fluids, freon and other contaminated liquids must be drained from scrapped items in a designated area and disposed of or recycled properly before the items are placed in the scrap storage area. See BMP S.2 in Chapter 5 for acceptable disposal options. The designated fluid draining area must be covered and paved, or if not covered, must be paved and sloped to a drain and holding tank. See BMP S.3 in Chapter 5 for drainage alternatives. Batteries must also be removed and recycled properly prior to storage.
- Employees must be educated about the need for stormwater pollution protection, and proper maintenance of BMPs. They also must have training in spill cleanup procedures, and appropriate cleanup materials must be stocked near the fluid draining area.

- Catch basins on the property must be cleaned as needed. See BMP S.9 in Chapter 5 for more details.
- If the storage area is small, the scrap or recycling materials must be covered. See BMPs S.4 and S.5 in Chapter 5 for further details on coverings.

OR

• If the storage area cannot be covered, a stormwater treatment system consisting of a wet pond/vault, infiltration basin with underdrains, filtration system, or vegetated biofilter preceded by an oil/water separator must be provided to treat runoff from the entire material storage area. See BMP T.1 through T.5 in Chapter 5 for detailed information on these treatment methods.

Suggested BMPs

- The material storage area can be paved and sloped to a drain and holding tank. See BMP S.6 in Chapter 5 for details on this drainage strategy.
- Use of a containment dike, curb, or berm can help prevent contaminated runoff from leaving the site, and can function to direct runoff to one of the treatment methods mentioned under the Required BMPs. See BMP S.7 in Chapter 5 for more details.
- Chemical addition can be used to enhance settling or adjust pH in a wet pond/vault or filtration system. See BMP T.2 and T.4 in Chapter 5 for details on these systems.
- Recycle, reuse, or let others use your scrap materials.

A4.4 Storage of Solid Wastes and Food Wastes

Description of Pollutant Sources: This activity applies to businesses and public agencies that store solid wastes and food wastes outdoors. This includes ordinary garbage. If improperly stored in our climate, these wastes can contribute a variety of different pollutants to stormwater. Requirements for handling and storing solid waste may include a permit from the Tacoma-Pierce County Health Department. For more information, call the Waste Management Section at (253) 798-6047.

NOTE: Dangerous solid wastes must be stored and handled under special guidelines. Businesses and agencies that store dangerous wastes must follow specific regulations outlined by Ecology and, in some cases, the Tacoma-Pierce County Health Department. Ecology regulations are outlined in Chapter 6. Please contact Ecology at (360) 407-6300 and the Tacoma-Pierce County Health Department at (253) 798-6047 for the specific requirements and permitting information.

Pollutants of concern include toxic organic compounds, oils and greases, heavy metals, nutrients, suspended solids, chemical oxygen demand (COD), and biochemical oxygen demand (BOD).

Pollutant Control Approach: Store wastes in suitable containers with leakproof lids. Sweep or shovel loose solids. Educate employees about the need to check for and replace leaking containers.

Required BMPs

The following BMPs are required of all businesses and public agencies engaged in storage of non-dangerous solid wastes or food wastes:

- All solid and food wastes must be stored in suitable containers. Piling of wastes without any cover is not acceptable.
- Storage containers must be checked for leaks and replaced if they are leaking, corroded, or otherwise deteriorating.
- Storage containers must have leak-proof lids or be covered by some other means (Figure 4.14). Lids must be kept closed at all times. This is especially important for dumpsters, as birds can pick out garbage and drop it, promoting rodent, health, and stormwater problems.

OR

• If lids cannot be provided for the waste containers, or they cannot otherwise be covered, there is another option: a designated waste storage area must be provided with a containment berm, dike, or curb, and the designated area must drain to a sanitary sewer (contact Industrial

Pretreatment Program at (253) 798-3013 prior to any connections) or holding tank for further treatment. See BMP S.7 and S.3 in Chapter 5 for more information.



Figure 4.14. Solid Waste Dumpsters with Properly Sealed Lids.

- Employees must be trained to frequently check storage containers for leaks and to ensure that the lids are on tightly.
- The waste storage area must be swept or otherwise cleaned frequently to collect all loose solids for proper disposal in a storage container. Do not hose the area to collect or clean solids.
- If you clean your containers, all rinse water from cleaning must be disposed of in a sanitary sewer or septic system.
- Clean out catch basins on your property that receive drainage from your waste storage area. See BMP S.9 in Chapter 5 for details on catch basin cleaning.

Suggested BMPs

- If the amount of waste accumulated appears to frequently exceed the capacity of the storage container, then another storage container should be obtained and utilized.
- Store containers such that wind will not be able to knock them over.
- Designate a storage area, pave the area, and slope the drainage to a holding tank to prevent stormwater run-on or run-off. If a holding tank is used, the contents must be pumped out before the tank is full and properly

- disposed of. See BMP S.2 in Chapter 5 for more information on disposal options.
- Compost appropriate wastes. Contact Pierce County Solid Wastes at (253) 593-2179 for more information on composting.
- Recycle your solid wastes. The Industrial Materials Exchange program facilitates the transfer of excess materials and wastes to those who can use them. Industrial Materials Exchange can be reached at (206) 296-4899, toll free 1-888-TRY-IMEX or on the Web at:

<www.govlink.org/hazwaste/business/imex/index.html>.

A4.8 Storage of Liquids in Permanent Aboveground Tanks

Description of Pollutant Sources: Aboveground tanks containing liquids (excluding uncontaminated water) may be equipped with a valved drain, vent, pump, and bottom hose connection. They may be heated with steam heat exchangers equipped with steam traps. Leaks and spills can occur at connections and during liquid transfer. Oil and grease, organics, acids, alkalis, and heavy metals in tank water and condensate drainage can also cause stormwater contamination at storage tanks.

Pollutant Control Approach: Install secondary containment or a double-walled tank. Slope the containment area to a drain with a sump. Stormwater collected in the containment area may need to be discharged to treatment such as an **API** or **coalescent plate** oil/water separator, or equivalent BMP. Add safeguards against accidental releases including protective guards around tanks to protect against vehicle or forklift damage, and tag valves to reduce human error. *Tank water and condensate discharges are process wastewater that may need an NPDES permit.*

Required BMPs

- Inspect the tank containment areas regularly to identify problem components such as fittings, pipe connections, and valves for leaks/spills, cracks, corrosion, etc.
- Place adequately sized drip pans beneath all mounted taps and drip/spill locations during filling/unloading of tanks. Valved drain tubing may be needed in mounted drip pans.
- Sweep and clean the tank storage area regularly, if paved.
- Replace or repair tanks that are leaking, corroded, or otherwise deteriorating.
- All installations shall comply with the Uniform Fire Code and the National Electric Code.
- Locate permanent tanks in impervious (Portland cement concrete or equivalent) secondary containment surrounded by dikes as illustrated in Figure 4.19, or Underwriters Laboratory approved double-walled. The dike must be of sufficient height to provide a containment volume of either 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank, whichever is greater, or, if a single tank, 110 percent of the volume of that tank.



(Photo courtesy of Seattle Public Utilities)

Figure 4.19. Aboveground Storage Tanks with Secondary Containment.

- Slope the secondary containment to drain to a dead-end sump (optional), or equivalent, for the collection of small spills.
- Include a tank overfill protection system to minimize the risk of spillage during loading.
- If the tank containment area is uncovered, equip the outlet from the spill-containment sump with a shutoff valve, which is normally closed and may be opened, manually or automatically, only to convey contaminated stormwater to approved treatment or disposal or convey uncontaminated stormwater to a storm drain. Evidence of contamination can include the presence of visible sheen, color, or turbidity in the runoff, or existing or historical operational problems at the facility. Simple pH measurements with litmus or pH paper can be used for areas subject to acid or alkaline contamination.
- At petroleum tank farms, convey stormwater contaminated with floating oil or debris in the contained area through an API or coalescent plate type oil/water separator (Volume V, Treatment BMPs) or other approved treatment prior to discharge to storm drain or surface water.

A4.9 Parking and Storage for Vehicles and Equipment

Description of Pollutant Sources: Parked vehicles at public and commercial parking lots, such as retail store, fleet vehicle (including rent-a-car lots and car dealerships), equipment sale and rental parking lots, and parking lot driveways, can be sources of toxic hydrocarbons and other organic compounds, oils and greases, metals, and suspended solids.

Required BMPs

- If washing of a parking lot is conducted, discharge the washwater to a sanitary sewer (if allowed by Pierce County Industrial Pretreatment Program at (253) 798-3013) or other approved wastewater treatment system, or collect it for offsite disposal.
- Do not hose down the area to a storm drain or receiving water. Sweep parking lots, storage areas, and driveways regularly to collect dirt, waste, and debris.
- An oil removal system such as an API or coalescent plate oil and water separator, or equivalent BMP (see Volume V), approved by Pierce County, is applicable for parking lots meeting the threshold vehicle traffic intensity level of a high-use site. For more information on high-use sites, refer to Volume I, Section 4.2.5, and Volume V, Section 3.2.

A7.9 Roof and Building Drains at Manufacturing and Commercial Buildings

Description of Pollutant Sources: Stormwater runoff from roofs and sides of manufacturing and commercial buildings can be sources of pollutants caused by leaching of roofing materials, building vents, and other air emission sources. Vapors and entrained liquid and solid droplets/particles have been identified as potential pollutants in roof/building runoff. Metals, solvents, acidic/alkaline pH, BOD, and organics are some of the pollutant constituents identified.

Pollutant Control Approach: Evaluate the potential sources of stormwater pollutants and apply source control BMPs where feasible.

Required BMPs

- If leachates and/or emissions from buildings are suspected sources of stormwater pollutants, then sample and analyze the stormwater draining from the building.
- If a roof/building stormwater pollutant source is identified, implement appropriate source control measures such as air pollution control equipment, selection of materials, operational changes, material recycle, process changes, etc.
- Bare galvanized metal shall not be used for materials that convey stormwater, such as roofs, canopies, siding, gutters, downspouts, roof drains, and pipes. Any galvanized materials shall have an inert, non-leachable finish, such as a baked enamel, fluorocarbon paint (such as Kynar or Hylar), factory-applied epoxy, pure aluminum, or asphalt coating. Acrylic paint, polyester paint, field-applied, and Galvalume coatings are not acceptable.

Minimum BMP Identification	Worksheet #10
	Provided By: Rob Dudra
	Title: Assistant Municipal Stormwater Permit Coordinator
Remman Hall Facility	Date: 11-01-2010

Describe the BMP's that are needed for the facilii description shall include the following minimum	Describe the BMP's that are needed for the facility to address existing and potential pollutant sources identified in Worksheets #3, 5, and 8. The description shall include the following minimum requirements.
BMP's	Brief Description of Activities or Improvements
Good Housekeeping	Pierce County Stormwater Management and Site Development Manual: A2.2; A4.4; A4.8; A4.9
Preventive Maintenance	Pierce County Stormwater Management and Site Development Manual: A3.11; A4.1; A4.8; A7.9
Spill Prevention and Emergency Cleanup	Pierce County Stormwater Management and Site Development Manual: A2.2 If a spill occurs that is larger than can be contained by the spill kits, Pierce County staff are instructed to contact the Washington Department of Ecology (DOE) at 1.800.258.5990. If any toxic substances or other unknown materials are found, call 1.360.407.6300.

BMP Implementation Plan	Worksheet #11
	Provided By: Rob Dudra
	Title: Assistant Municipal Stormwater Permit Coordinator
Remman Hall Facility	Date: 11-01-2010

Develop a plan for impler Those steps (list dates)	Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (I.E. any construction or design), the schedule for completing Those steps (list dates) and the person(s) responsible for implementation	any construction or design), the sche	dule for completing
BMP's		Scheduled milestone and completion date(s)	Person(s) responsible for action
Good Housekeeping	1. Recycle Materials	Currently Practiced	All Staff
	2. Proper Storage of Potentially Hazardous Materials	Currently Practiced	All Staff
	3. Regular and Proper Clean Up In Fueling and Material Transfer Areas	Currently Practiced	All Staff
Preventive Maintenance	1. Mitigate Spills	Currently Practiced	PPT (Worksheet #2)
	2. Maintenance of Storage Tanks	Annually	Supervisor
	3. Regular Maintenance of Vehicles and Equipment	Currently In Place	All Staff
Spill Prevention and			
Emergency Cleanup			
Inspections	1. Routine Water Quality Inspections & Periodic (Wet/Dry Season)	Refer to Stormwater Operation	PC SurfaceWater
	Inspections (Refer to Tab #9)	& Maintenance Program (SWOMP) Document	Management
	2. Regular Facility Inspections	Currently Practiced	All Staff
	3. Regular Vehicle and Equipment Inspections	Currently Practiced	All Staff
Source Control BMP's			

Treatment BMD's	1 Exterior Stored Broducts On Bayed Surface	Currently Dracticed	A11 Staff
Heatinein Divil S	1: Exicilor-Stored Hounels Out aved Surface	Currently Hacticed	All Stall
	2. Double Contain/ Cover Exterior-Stored Products	Currently Practiced	All Staff
	3. For Large Spills, DOE will be Contacted	Currently Practiced	All Staff
	4. Review SWOMP Document	By 12/31/2010	All Staff

				1	1	1		
Title: Assistant Municipal Stormwater Permit Coordinator Date: 11-01-2010	y thereof behind this Worksheet.	Actions						
Title: As Date: 1	t or cop							
	Summarize the results of monitoring activity. Place the each monitoring report or copy thereof behind this Worksheet.	Performed Results By						
(October 1 to April 30) (May 1 to September 30) Remman Hall Facility	the results of monitoring a	Type of Inspection						
(October (May 1 to Remman	Summarize	Date						

* Must be completed by person identified in the SWPPP. Certification by Responsible Company Official: I certify under penalty of law, that this document and all attachments were prepared Record pollutant sources/ generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive. List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Recommended Action Steps Certification (Other certification documents may be used as required in Section S4 of the Permit) Worksheet #12 A Completed By*: Oil Sheen, Discoloration, Turbidity, Odor, Ground Discharge ID | List Observed Pollutants and Description of Intensities of Each. Include Floatables, Title: Date: etc. in the Stormwater. Record of Visual Inspections Of Stormwater Discharges Surface Discharge ID Remman Hall Facility Date

responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluated the information. Based on my inquiry of the person or persons who manage the systems or those persons directly complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Title	Date Signed
ame	gnature

Stormwater Operation & Maintenance Program (SWOMP)	Provided By: Rob Dudra
Remman Hall Facility	Title: Assistant Municipal Stormwater Permit Coordinator Date: 11-01-2010

(Place SWOMP Document Behind This Sheet)

Remann Hall Detention Center

Drainage System Overview

Stormwater runoff from the parking lot of the Remann Hall is collected in a private system of storm lines and catch basins all of which are conveyed south, where it merges with the City of Tacoma's right-of-way stormwater system to a discharge point into the Leach Creek drainage to Chambers Creek drainage to Puget Sound. A flow restrictor device is noted in one of the catch basins in the private system.

Regular maintenance shall be conducted when an exceedence of the maintenance standard is identified in the annual inspection. Specifications of the maintenance plan will be added immediately following the first annual inspection.

Catch Basins

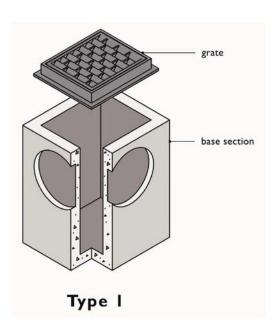
atch basins are underground concrete structures typically provided with a slotted grate to collect stormwater runoff and route it through underground pipes. Catch basins can also be used as a junction in a pipe system and may have a solid lid. There are two catch basin types.

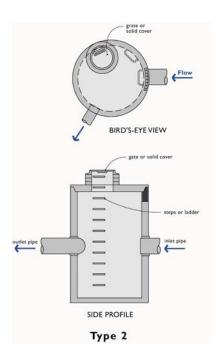
A Type 1 catch basin is a rectangular box with approximate dimensions of 3'x2'x5'. Type 1 catch basins are utilized when the connected conveyance pipes are less than 18 inches in diameter and the depth from the gate to the bottom of the pipe is less than 5 feet.

Type 2 catch basins, also commonly referred to as storm manholes, are round concrete structures ranging in diameter of 4 feet to 8 feet. Type 2 catch basins are used when the connecting conveyance pipe is 18 inches or greater or the depth from grate to pipe bottom exceeds 5 feet. Type 2 catch basins typically have manhole steps mounted on the side of the structure to allow for access.

Both catch basin types typically provide a storage volume (sump) below the outlet pipe to allow sediments and debris to settle out of the stormwater runoff. Some catch basins are also provided with a spill control device (inverted elbow on outlet pipe) intended to contain large quantities of grease or oils.

The most common cleaning method for catch basins is to utilize a truck with a tank and vacuum hose (vactor truck) to remove sediment and debris from the sump. Catch basins may be an enclosed space where harmful chemicals and vapors can accumulate. Therefore, if the inspection and maintenance requires entering a catch basin, it should be conducted by an individual with training and certification in working in hazardous confined spaces.





Control Structure/Flow Restrictor Checklist (Continued) Catch Basins Checklist

			Da	ate				
Frequency	Drainage System Feature	✓	✓	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
A	General					"Dump no pollutants " Stencil or stamp not visible	Stencil or stamp should be visible and easily read	Warning signs (e.g., "Dump No Waste- Drains to Stream") shall be painted or embossed on or adjacent to all storm drain inlets.
M,S	General					Trash & Debris	Trash or debris which is located immediately in front of the catch basin opening or is blocking inletting capacity of the basin by more than 10%.	No trash or debris located immediately in front of catch basin or on grate opening.
М	General					Trash & Debris	Trash or debris (in the basin) that exceeds 60 percent of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of six inches clearance from the debris surface to the invert of the lowest pipe.	No trash or debris in the catch basin.
М	General					Trash & Debris	Trash or debris in any inlet or outlet pipe blocking more than 1/3 of its height.	Inlet and outlet pipes free of trash or debris.
М	General					Trash & Debris	Dead animals or vegetation that could generate odors that could cause complaints or dangerous gases (e.g., methane).	No dead animals or vegetation present within the catch basin.
М	General					Sediment	Sediment (in the basin) that exceeds 60 percent of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe.	No sediment in the catch basin
A	General					Structure Damage to Frame and/or Top Slab	Top slab has holes larger than 2 square inches or cracks wider than 1/4 inch (Intent is to make sure no material is running into basin).	Top slab is free of holes and cracks.

Control Structure/Flow Restrictor Checklist (Continued)

			Da	ate				
Frequency	Drainage System Feature	✓	✓	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
A	General					Structure Damage to Frame and/or Top Slab	Frame not sitting flush on top slab, i.e., separation of more than 3/4 inch of the frame from the top slab. Frame not securely attached.	Frame is sitting flush on the riser rings or top slab and firmly attached.
А	General					Fractures or Cracks in Basin Walls/ Bottom	Maintenance person judges that structure is unsound.	Basin replaced or repaired to design standards.
А	General					Fractures or Cracks in Basin Walls/ Bottom	Grout fillet has separated or cracked wider than 1/2 inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.	Pipe is re-grouted and secure at basin wall.
А	General					Settlement / Misalignment	If failure of basin has created a safety, function, or design problem.	Basin replaced or repaired to design standards.
М	General					Vegetation	Vegetation growing across and blocking more than 10% of the basin opening.	No vegetation blocking opening to basin.
М	General					Vegetation	Vegetation growing in inlet/outlet pipe joints that is more than six inches tall and less than six inches apart.	No vegetation or root growth present.
М	General					Contamination and Pollution	Any evidence of oil, gasoline, contaminants, or other pollutants (Coordinate removal/cleanup with local water quality response agency).	No contaminants or pollutants present.
A	Catch Basin Cover					Cover Not in Place	Cover is missing or only partially in place.	Any open catch basin requires maintenance. Catch basin cover is closed
А	Catch Basin Cover					Locking Mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than 1/2 inch of thread.	Mechanism opens with proper tools.
А	Catch Basin Cover					Cover Difficult to Remove	One maintenance person cannot remove lid after applying normal lifting pressure. (Intent is to keep cover from sealing off access to maintenance.)	Cover can be removed by one maintenance person.

Control Structure/Flow Restrictor Checklist (Continued)

			Da	ate				
Frequency	Drainage System Feature	✓	1	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
A	Ladder					Ladder Rungs Unsafe	Ladder is unsafe due to missing rungs, not securely attached to basin wall, misalignment, rust, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.
	Grates					Grate opening Unsafe	Grate with opening wider than 7/8 inch.	Grate opening meets design standards.
M,S	Grates					Trash and Debris	Trash and debris that is blocking more than 20% of grate surface inletting capacity.	Grate free of trash and debris.
А	Grates					Damaged or Missing.	Grate missing or broken member(s) of the grate.	Grate is in place and meets design standards.

If you are unsure whether a problem exists, please contact a Professional Engineer.

Comments:

Key:

- (M) Monthly from November through April.(A) Once in late summer (preferable September)(S) After any major storm (use 1-inch in 24 hours as a guideline).

Stormwat	Stormwater Operation & Maintenance Program (SWOMP) Log	ance Program (SV	WOMP) Log	Worksheet #13 Provided By: Rob Dudra	3 Rob Dudra	
Remman	Remman Hall Facility			Title: Assistant Mur Date: 11-01-2010	Fitle: Assistant Municipal Stormwater Permit Coordinator Date: 11-01-2010	
- - -		(-		1
This log ch	This log chronicles the ongoing performance of Operation & Maintenance activities detailed in the SWOMP.	ormance of Operat	ion & Maintenance acti	vities detail	ed in the SWOMP.	
Date	Activity Description	Performed	Results		Forward Actions	
		By				

Worksheet #13 Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 11-01-2010	detailed in the SWOMP. Forward Actions				
Worksheet #13 Provided By: F Title: Assistant Date: 11-01-2	ctivities o				
(SWOMP) Log	eration & Maintenance ad				
nance Program	formance of Ope Performed By				
Stormwater Operation & Maintenance Program (SWOMP) Log Remman Hall Facility	This log chronicles the ongoing performance of Operation & Maintenance activities detailed in the SWOMP. Date Activity Description By By				
Stormwat Remman	This log ch				

Employee Training Log	Worksheet #14
	Provided By: Rob Dudra
	Title: Assistant Municipal Stormwater Permit Coordinator
Remman Hall Facility	Date: 11-01-2010

Describe the annual tra	Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices.	and material management	practices.
* Place Employee Traii	* Place Employee Training Attendee Sign-in Sheet (Worksheet 13A) behind Employee Training Log	•	ı
Training Topics	Brief Description of Training Program / Materials	Scheduled for Training	Attendees
	(e.g., video, presenter, newsletter course)	(list dates)	(by position)*
Spill Prevention and	Review/ Training on BMP A4.8	04-22-2011	Staff
Response			
Good Housekeeping			
Material Management			
Practices			
Other Topics			
Communication Channels			

POLLUTION PREVEN	POLLUTION PREVENTION TEAM (P2 Team)	
SWPPP		
Implementation		
Monitoring		
Procedures		

Employee Training Log	Worksheet #14
	Provided By: Rob Dudra
	Title: Assistant Municipal Stormwater Permit Coordinator
Remman Hall Facility	Date: 11-01-2010

Describe the annual trai	Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices.	ınd material management p	oractices.
* Place Employee Train	* Place Employee Training Attendee Sign-in Sheet (Worksheet 13A) behind Employee Training Log		
Training Topics	Brief Description of Training Program / Materials	Scheduled for Training	Attendees
	(e.g., video, presenter, newsletter course)	(list dates)	(by position)*
Spill Prevention and			
Response			
Good Housekeeping			
Material Management			
Practices			
Other Topics			
Communication			
Channels			

POLLUTION PREVENTION TEAM (P2 Team) POLLUTION PREVENTION TEAM (P2 Team) SWPPP Implementation Monitoring Procedures		
SWPPP Implementation Monitoring Procedures	POLLUTION PREVENTION TEAM (P2 Team)	
SWPPP Implementation Monitoring Procedures		
Implementation Monitoring Procedures	SWPPP	
Monitoring Procedures	Implementation	
Procedures	Monitoring	
	Procedures	
		-

Employee Training Attendee Sign-In Sheet Remman Hall Facility	Sheet		Worksheet #14A Provided By: Title:
Training Location: Topic(s): Presenter:	Date:	_	Date:

Provide and complete this document for each training event.

Facility Work Position							
Signature							
Print Name							
Today's Date: Print Name							

Worksheet #14A Provided By: Title: Date: Date: 32 / 1/9/1 / 201/ Employee Training Attendee Sign-In Sheet Annex / LESA / 911 Comm Center Training Location: Topic(s): $A \notin \mathcal{S}$ Presenter:

Provide and complete this document for each training event.

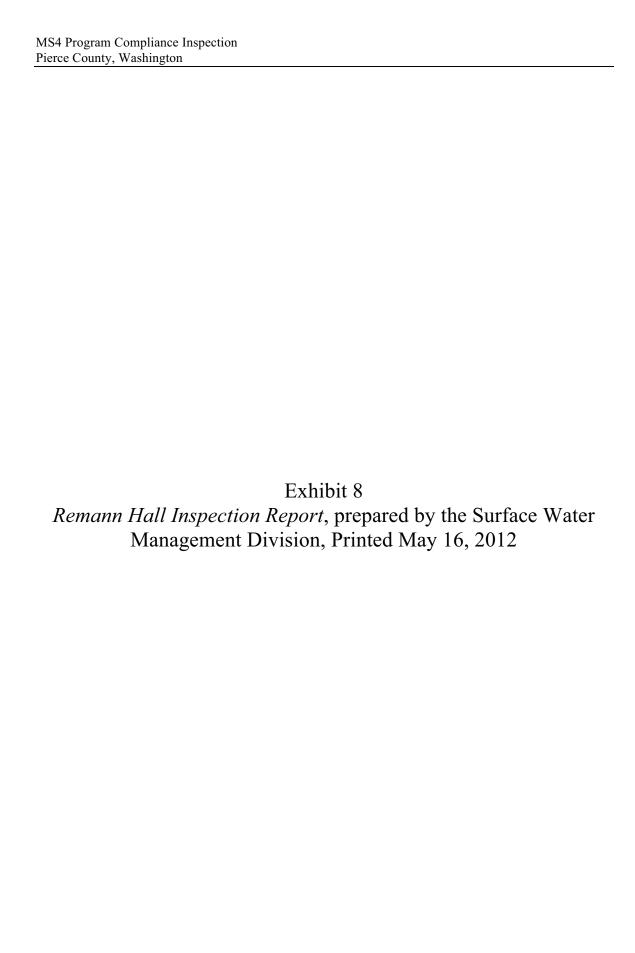
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			Nemann 1/4//

Employee Training Attendee Sign-In Sheet Remman Hall Facility	250	Worksheet #14A Provided By: Title:
Date: /		ate:
day's Date: Print Name	My MC 3.0	Facility Work Position
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Fardur	Carden	Kemann Hall
		ICAMINE HITTE

Worksheet #15 Initiated By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 05-28-2010	
Inspection Log Remman Hall Facility	

This sheet represents chronological documentation of all inspections for the facility

Actions	Creation of Stormwater Pollution Prevention Plan (SWPPP); Development of A Stormwater Operation & Maintenance Program (SWOMP)	P2 Team Meeting; BMPs discussed @ Staff meetings	P2 Team Meeting; BMPs discussed @ Staff meetings; Wet Season Inspection Q1 2012		
Results	Determined SWPPP Would be Required; Concurrent Inspection of Stormwater System	SWPPP Entry/ Instruction; P2 Team Meeting Needed	SWPPP Review/Update		
Performed By	Corrie Smith / Clarence Johnson Pierce Co. SWM	Rob Dudra/ Pierce Co. SWM	Rob Dudra/Corrie Smith/Rondi Felton Pierce Co. SWM		
Standard Compliance Rating (1-5)	Initial Assessment	3	3		
Type of Inspection	Initial Assessment	Wet Season SWPPP Inspection	Dry Season Inspection		
Date	10-06-2010	04-20-2011	09-19-2011		







Work Order PC-14092

Pierce County

Printed 5/16/2012 - 12:05:35 PM (Duplicate Copy)

Asset Name: Remann Hall

3701 Asset ID:

Site Address: 1501 6th Ave, Tacoma, WA

CSM / CRP:

-	W	C	r	K	O	rd	ler	D	e	tai	IS

Contact:

Phone:

Target Date & Est. Project Length: 1/2/2012 (2) hrs

Assigned To:

Smith, Corrie

Phone:

(253) 798-3073

Site Comments: Z7 Annual Inspection_C (Eddie's cell: 202-4180. Electronic storm plans and details sheets are attached to Asset. Remann Hall discharges into the Leach Creek system.)

Site Details —————			
Basin		000	
Control Structure?	-	YES	
Gate Code	_	_	_
Parcel Number		9795000010	-
Pond Type 1	_	SUBDET	_
Pond Type 2	_	-	_
Pond Type 3	_	-	_
Sewered?		YES	_
Source Control PPGS	-	YES	_
Surface Water Credit Program?			_
WQ Feature Type 1	-	-	_
WQ Feature Type 2	-		-
WQ Feature Type 3	_	_	_

Work Order History (Most Recent 2)

WO#	Reason	Status	Target Date	Labor Report
PC-12375	Drums containing waste fryer oil are not labeled (see photo X).	Closed	3/25/2012	Label the drums so the contents are identified.
PC-12377	Solid waste is stored uncovered, in direct contact with the ground, in an area that does not drain to treatment (see photo Y).	Closed	3/25/2012	Store solid waste in a garbage receptacle that has a solid lid, or under other impervious cover.

Labor	Work Date	Reg Hrs	OT Hrs	Other Hrs
Smith, Corrie	1/13/2012	8	0	0

Findings

Project Start Date: 1/13/2012 1:19:00 PM Project Completion Date: 1/10/2012 1:19:00 PM Supervisor Initials: CS

Crew Comments/Results:

C. Smith. BMP rating=2; limited or no access to structures on-site (flow restrictor is still not accessible for inspection). Conducted inspection with Mark Schuler, City of Tacoma Source Control Inspector. Reviewed status of progress on last year's recommendations with Eddie Parker, Maintenance Supervisor, and Anthony, Progress House staff.

Building foundation underdrains (groundwater) discharge to two area drains that were inaccessible for inspection due to landscaping vegetation and quarry spalls (photos attached). These two area drains discharge to structures that were found to have very little or no sediment accumulation. The City of Tacoma inspector agreed that it's unnecessary to require exposure for inspection of these area drains.

PASSED: CBs that were identified as exceeding the maintenance standard in last year's inspection were found to be clean upon this inspection. Above ground 1,000 gallon diesel fuel tank is in good condition, fueling hoses appear in good condition, and fueling area is clean and has stocked and labeled spill response kit. Dumpsters

have closed lids and no loose trash or debris. Solid waste that was stored in direct contact with the ground during last year's inspection, has been removed and properly disposed of. Drum storing kitchen grease is properly labeled and stored with a solid lid and compression ring. (photos attached)

DEFICIENT: Five CBs have excessive sediment. Flow restrictor is still buried and inaccessible for inspection. Storm manhole in drainage line along east parcel boundary is buried by vegetation and inaccessible for inspection. Flooding in loading dock area and the resulting TV'ng of line identified tree roots have caused damage and obstruction of the drainage line along east parcel boundary. Solid waste is still stored in a Pierce County drop-box that is missing solid cover (drop-box has a mesh-screen lid).

Inspector	Received By	
	¥	
	*	



Complete Printed: 5/16/2012 12:13:54 PM Facilities Assessment - Facilities Management - Reported

Ctrl-Enter = Save | F2 Key / Dbl-Click = Lookup F5 Key = Refresh | Esc Key = Close Message

Report Criteria

Location / Asset is Remann Hall

Type is equal to Punch LIst

Format Criteria

Format 1 Target Date is within All To Date

Format 2 Target Date is within Next 6 Months

Format 3 Date Reported Complete has a value

Compliance Existing Condition Rating Item

Required Action

Procedure Name

Complete Reported Date Target Date

Complete? Reported

✓ Save All

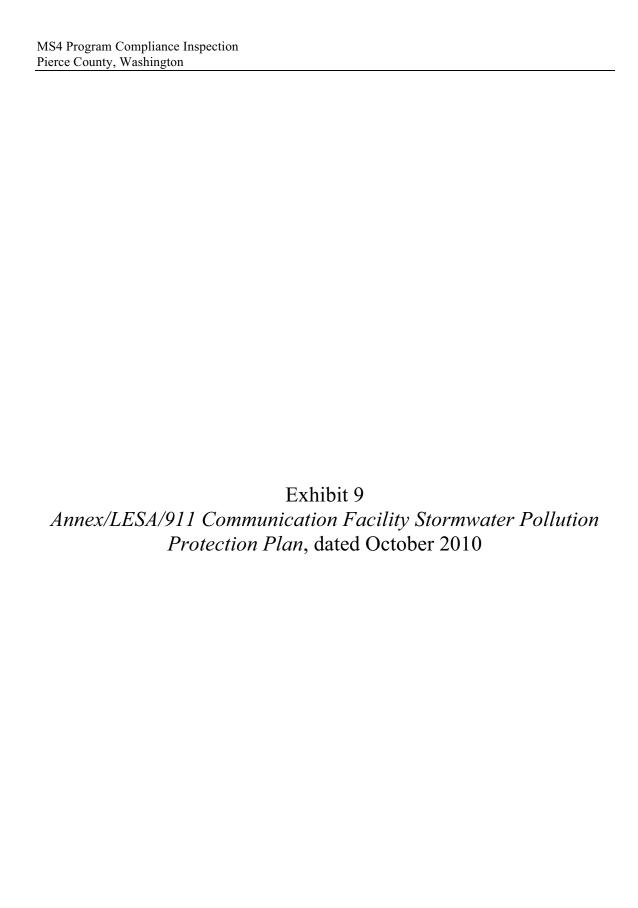
Facilities Management > Remann Hall

✓ Save	√ Save	/ Save	
2/17/2012			
3/25/2012	9/25/2012	9/26/2012	3/26/2014
Source Control 3/25/2012 2/17/2012 Punchlist	Source Control Punchlist	6 Month Punchlist	2 Year
Expose and raise elevation of manhole lid for access to inspect flow restrictor.	Implement BMP A4.4 - Storage of Solid Wastes and Food Wastes (attached) or document other operational or structural best management practices that prevent the release of pollutants associated with this land use.	Remove sediment from catch 6 Month basins.	Clear pipe of roots, inspect
Flow restrictor is inaccessible for inspection (see attached map entitled 'Remann Hall' for location). Access to the flow restrictor was requested in 2011 (refer to 2011 NPDES Stormwater Operations and Maintenance Assessment of Facilities Management Department Facilities).	Solid waste is stored in a drop-box that Implement BMP A4.4 - has a mesh-screen type lid (photo A and map entitled 'Remann Hall' attached).). The 2011 recommended attached attached).). The 2011 recommended document other operating storage activity (refer to 2011 NPDES management practices prevent the release of Maintenance Assessment of Facilities).	Five CBs have excessive sediment (locations shown on attached map entitled 'Remann Hall').	Tree roots have obstructed portions of Clear pipe of roots, inspect 2 Year
m	м	m	3
PC- 12374	PC- 12376	PC- 14110	PC-

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Facilities Assessment - Facilities Management - Reported Complet	
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Page 2 of 2

Punchlist	
pipe, and replace pipe as	necessary.
the storm drainage pipe that runs	along the east parcel boundary (location shown on attached map entitled 'Remann Hall').
14112	



SWPPP

ANNEX/LESA/911 COMM CENTER

Stormwater Pollution Protection Plan



October 2010



Surface Water Management Division

STORMWATER POLLUTION PREVENTION PLAN **ANNEX / LESA / 911 COMM CENTER ふ**の

FACILITY OPERATIONS DESCRIPTION	1
POLLUTION PREVENTION TEAM	2
FACILITY ASSESSMENT	3
MATERIALS INVENTORY	4
SITE MAP	5
IDENTIFY AREAS WITH INDUSTRIAL ACTIVITY	6
DESCRIPTION OF EXPOSED SIGNIFICANT MATERIALS	7
LIST OF SIGNIFICANT SPILLS AND LEAKS	8
NON-STORMWATER DISCHARGE DRY WEATHER ASSESSMENT & CERTIFICATION	9
MINIMUM BMP IDENTIFICATION	10
BMP IMPLEMENTATION PLAN	11
DISCHARGE MONITORING LOG / REPORTS	12
STORMWATER SYSTEM MAINTENANCE PLAN / LOG	13
EMPLOYEE TRAINING LOG / ATTENDANCE SHEETS	14
INSPECTION RECORD	15

Objectives of the SWPPP

This document serves as the Stormwater Pollution Prevention Plan (SWPPP) for a Pierce County owned, lessor/lessee, and/or operated facility.

The objectives of this SWPPP are:

- To identify locations of all materials that could cause pollution if spilled or otherwise released into the environment;
- To identify all storm sewer conveyances, treatment facilities, and discharge points to aid in the isolation of contaminants should any be spilled into the system;
- To identify locations of all spill containment equipment and materials;
- To implement and maintain best management practices (BMPs) that identify, reduce, eliminate, and/or prevent the discharge of stormwater pollutants;
- To prevent violations of State surface water quality, groundwater quality, and sediment management standards; and
- To eliminate unpermitted discharges and other illicit discharges to separate storm drainage systems;
- Provide information to staff on universal and facility-specific BMPs

This document describes the methods and procedures that Pierce County personnel will implement in order to reduce and/or the contamination of stormwater runoff and discharges of pollutants.

This SWPPP contains BMPs which target reduction or elimination of the release of pollutants into the municipal separate storm sewer system (MS4) and surface waters.

The mechanisms for such a release may include the inadvertent contamination of stormwater from illicit discharges to the MS4 or spills that reach the MS4.

This document includes the following information:

- Description of SWPPP Coordinator requirements and responsibilities
- Identification of Pollution Prevention Team personnel

- Facility description and activities
- Identification of the Pierce County Stormwater Management & Site Development Manual, August 2008 as the primary and reference document
- Description of BMPs
- Description of monitoring, inspection, and recordkeeping requirements

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

SWPPP Facility Assessment Annex / LESA / 911 Comm Center

Worksheet #1 Completed By: Rob Dudra Title: Water Quality Specialist II

Date: 10/21/2011

Annex/ LESA/ 911 Comm Center
Facilities Management Department (253-798-4532)
Site Address: 2401 S. 35th Street
Tacoma, WA
October 23, 2010

Emergency Contact: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998 Emergency Phone: 253-202-4180

Secondary Contact: On-Call Supervisor Title: N/A

Office Phone: N/A Emergency Phone: 253-831-0328

Business Name: Annex: Pierce County Public Services

Law Enforcement Support Agency (LESA): 911 Communications Center

Start Up Date: 1963: Annex built; 1983: Pierce County Acquired

Operating Schedule: Annex: Monday – Friday 7 am – 5pm

LESA: 24/7

Spill Response Contractor: See DOE Hazmat Spill Contractor List (behind this page)

Entity Responsible for Stormwater System Maintenance: PC Facilities Management Department

Office Phone: 253-798-4532 Emergency Phone: 253-831-0328

NPDES Permit Number: WAR 04-4002 Effective: February 16, 2007

SWPPP Implemented: May 28, 2010 SIC Code: 7991

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

SWPPP Facility Assessment Annex / LESA / 911 Comm Center

Worksheet #1

Completed By: Wes Redlin

Title: Facilities Management Supervisor

Date: 10/27/2010

Annex/ LESA/ 911 Comm Center
Facilities Management Department (253-798-4532)
Site Address: 2401 S. 35th Street
Tacoma, WA
October 23, 2010

Emergency Contact: Wes Redlin Title: Facilities Management Supervisor

Office Phone: 253-798-4532 Emergency Phone: 253-389-1264

Secondary Contact: On-Call Supervisor Title: N/A

Office Phone: N/A Emergency Phone: 253-831-0328

Business Name: Annex: Pierce County Public Services

Law Enforcement Support Agency (LESA): 911 Communications Center

Start Up Date: 1963: Annex built; 1983: Pierce County Acquired

Operating Schedule: Annex: Monday – Friday 7 am – 5pm

LESA: 24/7

Spill Response Contractor: See DOE Hazmat Spill Contractor List (behind this page)

Entity Responsible for Stormwater System Maintenance: PC Facilities Management Department

Office Phone: 253-798-4532 Emergency Phone: 253-831-0328

NPDES Permit Number: WAR 04-4002 Effective: February 16, 2007

SWPPP Implemented: May 28, 2010 SIC Code: 7991

Hazmat Spill Contractor List

Ecology does not verify or endorse any of the contractors or information on this list. Information on this list is subject to change https://www.ecv.wa.gov/programs/spills/response/hazmatspillcontractlist.pdf

	http://www.ecy.wa.gow/programs/spills/response/nazmatspilloonifacilist.poi	poviprograms/spll	svrespons	sernazm	arspillo	ontractitsi.,	IDC				
COMPANY	COMPANY	SPILL	OIL S	SPILL	Haz	;	Reactives	Vac	VesseV	STATEC	STATE COVERAGE
LOCATION		NUMBER	Small*	Large	Mat	Organic**	Cyllinders	Truck	Water	Eastern	Western
Aberdeen	Apex Environmental	(360) 532-3590	×	×				×			×
	Evergreen Environmental Inc.	(360) 533-6141	×	×							×
d/Walfsburg	3 Kings Environmental	(360) 666-5464	×	×	×		×		×	×	×
Bellngham	Matrix Service	(360) 676-4905	×	XW							×
Bellingham	Western Reflnery Service	(360) 366-3303						×			×
Camas	West Coast Marine Cleaning	(360) 696-3362	×	×		×		X		×	×
Astoria/Corvallis, OR	NWFF Environmental	(800) 942-4614	MΧ	ΧW	×	×	×	×	×	×	×
EverettiOrting	Aspen Environmental, Ltd	(800) 716-3377	×	×	×			×		×	×
	Drakkar Industries	(253) 302-0014	×	×	×	×					×
	Rivers Edge Services	(206) 941-1645	×	×	×			X			×
Longview/Portland/Seattle		(877) 251-8557	×	×	×	×	×	×			×
		(360) 414-8655	×	XW	×			X			×
Longview/Astoria/Portland/Abendeen		(888) 423-6316	×	ΧW	×	×		×	×	×	×
	Environmental Quality Mingmt	(425) 673-2900	×		×	×					×
	Focus Environmental Mgt Group	(815) 621-2398					×			×	×
Portland/Eugene/Vancouver	First Strike Environmental	(800) 447-3558	×	×	×	×		×	×	×	×
	Oll Re-Refining Company	(800) 367-8894	×					×		×	×
Portland/Kennewick/Spokane	Harbor Oll	(503) 285-4648	×							×	×
Puyallup	Pro-Vac	(253) 435-4328	×	×				X		×	×
	Aqua Clean Jet-N-Vac, Inc.	(800) 842-5326	×	×		×		X		×	×
Tacoma	Northwest Cascade	(253) 848-2371				×		X	×		×
Tacoma	Certifled Cleaning Service	(253) 536-5500	×	XW	×			X		×	×
Tacoma	Guardian Industrial Services	(253) 536-0455	×	W				X		×	×
Tacoma	Emerald Services	(253) 627-4822		×	×					×	×
	PRS Group, Inc.	(253) 383-4175	×		×			×			×
Seattle	Baker Tanks	(425) 487-6503		×	×					×	×
Seattle	Ballard Diving & Salvage	(206) 782-6750		×					×		×
/Tacoma/Vancouver	Emerald Services Inc.	(206) 832-3000	×	X	X			X		×	×
	Clean Harbors	(800) 444-4244			×					×	×
Seattle/Tacoma/Spokane/Astoria	NRC Environmental Services, Inc.	(800) 337-7455	×	XW	X		×	X	×	×	×
	Global Environmental	(206) 623-0621	×	XW					×	×	×
Seattle	Marine Vacuum Service	(206) 762-0240	×	X				X		×	×
Seattle	ONYX Enviro. Services	(206) 241-3900			×		×			×	×
	Pacific Industrial Resources	(206) 767-3957	×	X	X		×	X		×	×
Washougal	Philip Services Corporation	(800) 547-2436		X	X			X		×	×
tland	Belfor Environmental	(800) 930-0011	×	×	×	×				×	×
Snohomish	Whiteside Inc	(360) 668-8282	×	×				X			×
	Able Clean-up Technoloiges	(509) 466-5255	MX	XW	X	×	×		×	×	
	Big Sky Industrial	(509) 624-4949	×	×				X		×	
Pasco	Tidewater Environmental	(360) 695-8088		×	×					×	×
	CADRE	(425) 883-8007					×			×	×

" Organic-sewage, blood, animal waste, etc. where WAC 173-181 Approved Primary Response Contractor (et.) for facilities. Small-roadside, home tank, saddle tank, storm drains, 1 drum, etc.

erification (M-F, 8-5)

Home Heating Oll Tanks - state of Washington - Pollution Liability Insurance Agency 1-800-822-3905 - Insurance V

The Following is a List of Regional Treatment Centers for Petroleum Contaminated Soil:

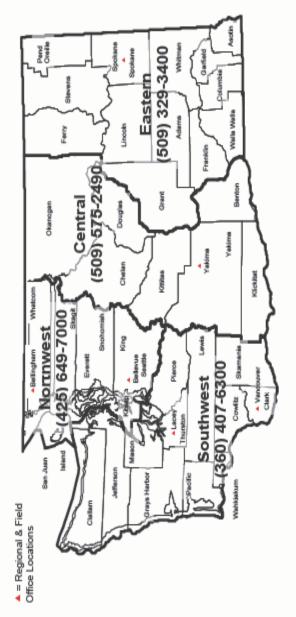
1		0		
CRO	Roosevelt	Roosevelt Regional Landfill	1-800-275-5641	Disposal Only
ERO	Spokane	Remtech, Inc.	(509) 624-0210	Thermal Desorption
NWRO	Everett	Rinker Materials	(425) 355-2111	Soil Remediation
NWRO	Seattle	Leforge Cement	(200) 937-8025	Cement Incorporation
SWRO	Tacoma	Petroleum Reclaiming Services	(253)383-4175	Stabilization/Disposal
SWRO	Port Angeles	Fields Shotwell Corp.	(360) 457-1417	Thermal Treatment/Recycling
SWRO	Portland OR.	Waste Management	(800) 685-8001	Disposal Only
SWRO	Fife	Fife Sand & Gravel	0177-229 (552)	Bio-Remediation

SWRO: Southwest Region ERO: Eastern Region NWRO: Northwest Region KEY: CRO: Central Region

Washington State Department of Ecology Regional Office 24-Hour Oil Spill/Release Reporting Numbers

WHAT WE NEED TO KNOW Responsible Party Material Released Contact Phone(s) Reporting Party

- Resource Damages
 - (e.g. dead fish)
- Quantity
- Concentration
- Cleanup Status Location



Or call the Department of Emergency Management 24-hour Number: 1-800-258-5990 For EPA and US Coast Guard reporting, call the National Response Center: 1-800-424-8802 Idaho: Communications Center (208) 327-7442 Oregon: Emergency Management (503) 378-63

Oregon: Emergency Management (503) 378-6377 EPA Region X, Seattle: (206) 553-1263

BC: Provincial Emergency Program (800) 663-3456

January 2010 (revised)

Stormwater Pollution Prevention

Stormwater pollution prevention is a partnership between NPDES Coordination of Pierce County Surfacewater Management (PC/SWM: 253-798-2725) and the Facility Supervisor/ SWPPP Coordinator and Facility Staff. PC/SWM will:

- Manage NPDES permit requirements (including developing, maintaining and revising the SWPPP);
- Assisting each facility with state and county regulatory issues pertaining to stormwater pollution prevention;
- Perform NPDES required inspections, semi-annually; and
- Assist in arranging stormwater pollutions training in the areas of awareness, response, BMPs, and illicit discharge recognition (IDDE).

The Facility Supervisor/ SWPPP Coordinator will:

- Ensure that each facility employee is in compliance with the Facility SWPPP regarding their operations;
- Certify the completeness and accuracy of the SWPPP by signing a certification statement.

Additionally, the Facility Supervisor/ SWPPP Coordinator will:

- Create a Pollution Prevention Team (PPT) by assigning one or more individuals by name and title to be responsible for assisting the SWPPP Coordinator:
- Establish implementation of applicable BMPs;
- Holding meetings to review the overall operation of the BMPs;
- Establishing responsibilities for inspections, on-site recordkeeping, O&M, and emergency situations; and
- Arranging the training of all team members in the operation, maintenance, and inspections of the applicable BMPs.

The Pollution Prevention Team (PPT) will:

• Assist the Facility Supervisor/ SWPPP Coordinator with his/her SWPPP responsibilites.

Pollution Prevention Team Annex / LESA / 911 Comm Center

Worksheet #2

Completed By: Rob Dudra Title: Water Quality Specialist II

Date: 10/21/2011

Responsible Official: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998 Cell Phone: 253-202-4180

Team Leader: Eddie Parker Title: Facilities Management Supervisor

Office Phone: 253-798-7998

Responsibilities: Cell Phone: 253-202-4180

Responsible for implementation of Storm Water Pollution Prevention Plan at Annex/LESA/911 Comm

Center

Team Member: Dave Emry Title: Maintenance Engineer

Office Phone: 798-3164 Cell Phone: none

Responsible for implementation of Storm Water Pollution Prevention Plan at Annex/LESA/911 Comm

Center

Responsibilities:

Pollution Prevention Team Annex / LESA / 911 Comm Center

Worksheet #2

Completed By: Wes Redlin Title: Parks Supervisor Date: 10/27/2010

Responsible Official: Wes Redlin Title: Facilities Management Supervisor

Office Phone: 253-798-4532 Cell Phone: 253-389-1264

Team Leader: Wes Redlin Title: Facilities Management Supervisor

Office Phone: 253-798-4532

Responsibilities: Cell Phone: 253-389-1264

Responsible for implementation of Storm Water Pollution Prevention Plan at Annex/LESA/911 Comm

Center

Team Member: Roy Nansel Title: Maintenance Engineer

Office Phone: 798-3164 Cell Phone: none

Responsible for implementation of Storm Water Pollution Prevention Plan at Annex/LESA/911 Comm

Center

Responsibilities:

Pierce County Stormwater Management and Site Development Manual

Volume IV Source Control

Prepared by: Pierce County Surface Water Management

Ordinance No. 2008–59S August 2008 Effective Date: March 1, 2009

Note:

This document may be viewed in its entirety on the Pierce County Public Works and Utilities internet site in the Stormwater and Flooding Menu / Periodicals: Manuals, Plans, Reports, Studies, Regulations, and Publications

Chapter 1 - Introduction to Volume IV

What is the Purpose of this Volume?

This volume was designed to help businesses, homeowners and public agencies in Pierce County implement source control best management practices (BMPs) to prevent pollutants from contaminating stormwater runoff and entering our rivers, lakes, and streams. Human and ecosystem health, safety, and welfare can be at risk from polluted stormwater. The implementation of BMPs is required by several programs, which are listed in Section 1.2 below. Every person/business in Pierce County is required to use BMPs. You need to select BMPs from this volume to prevent stormwater pollution. Refer to Section 1.4 below for additional information on BMPs. Information on stormwater treatment BMPs can be found in Volume I, Section 1.6 and Volume V.

How Do I Know Whether Any of this Applies to Me?

Because of the provisions of the federal Clean Water Act (CWA) and Coastal Zone Management Act, the National Pollutant Discharge Elimination System (NPDES) permit, and the Puget Sound Water Quality Authority Water Quality Management Plan, the implementation of BMPs applies to all businesses, residences and public agencies in Pierce County. It includes all permanent and temporary activities at public facilities, commercial and industrial facilities, agriculture and livestock farms, and residential dwellings. Anyone involved in a particular activity, whether as an employee, supervisor, manager, landlord, tenant, or homeowner, must take part in implementing appropriate BMPs. BMPs need to be selected from this volume.

Pierce County adopted the Regional Road Maintenance – Endangered Species Act (ESA) – Program Guidelines in 2002. This document was developed by the Tri-County Road Maintenance ESA Technical Working Group and contains guidelines for roadway maintenance operations, utility maintenance, maintenance of stormwater facilities, and other right-of-way structure maintenance within the right-of-way. The goal of the program guidelines is to provide a consistent, regional program that can be used by any agency wishing to limit, reduce, or eliminate the prohibition on take of threatened species under the 4(d) rule of the ESA. There is some overlap between this document, Volume IV of the Surface Water Management Manual, source control BMPs, and the above mentioned program guidelines. The Surface Water Management Manual, Volume IV Source Control BMPs are required as the minimum standard for source controls. The Regional Road Maintenance Manual may contain additional requirements above the Surface Water Management Manual minimum standards. What Type of Pollutants are We Targeting with This Volume?

Under the NPDES permit mentioned above, the county is required to show progress in eliminating virtually all non-stormwater discharges to the stormwater drainage system. In other words, **nothing but uncontaminated stormwater**

may be discharged to the Pierce County stormwater drainage system. There are severe state and federal penalties for anyone violating the terms of these permits. Illicit discharges may be intentional or unintentional, but either way are not allowed, see Pierce County Code (PCC) Title 11.05, *Illicit Stormwater Discharges*. You must keep pollutants from leaving your property and entering the county stormwater drainage system.

Pollutants can be placed into several broad categories. The descriptions provided below are quite brief, but further information on a particular pollutant can be obtained by calling one of the information numbers listed in Chapter 7.

pН

The pH value of a substance gives you a relative measure of whether it is acidic or basic. The pH value of a body of water is vitally important, since most aquatic life can operate within a relatively narrow band of pH values (6 to 8). Some sources that can contribute to a change in pH of stormwater and water bodies are cement in concrete pouring, paving, and recycling operations; solutions from metal plating; chemicals from printing businesses and other industrial processes; and household cleaners such as bleaches and deck washes.

Total Suspended Solids

This represents particulate solids such as eroded soil, heavy metal precipitates, and biological solids (all considered as conventional pollutants), which can cause sedimentation in streams and turbidity in receiving surface waters. Sediment is the most common pollutant present in stormwater runoff. These sediments can destroy the desired habitat for fish and can impact drinking water supplies. The sediment may be carried to streams, lakes, or Puget Sound where they may be toxic to aquatic life and make dredging necessary.

Oils and Greases

Oils and greases can be either petroleum-based or food-related sources. Petroleum-based compounds can be immediately toxic to fish and wildlife, and if they reach our drinking water aquifers, will make us sick too. Food-based oils and greases may not be toxic to us, but they can coat fish gills and insects, and suffocate them.

Oxygen-Demanding Substances

Degradable organic matter, such as yard, food, and pet wastes, and some chemical wastes, can have a drastic effect on water quality if they are allowed to enter stormwater. As these substances are broken down by bacteria, the oxygen in the water is consumed. This stresses and can eventually kill fish and other creatures in the water.

Metals

Metals are utilized in many products important to our daily lives. Certain metals, known as heavy metals, wear off of our car brakes and tires, and come from the paint and moss-killing roof strips and herbicides we use at our homes. These metals can cause severe health and reproductive problems in fish and animals that live in water and sediments that become contaminated by runoff.

Bacteria and Viruses

Bacteria and viruses from pet wastes, failing septic systems and agricultural areas can contaminate drinking water and close down swimming and shellfish areas. A group of bacteria called **fecal coliform bacteria** are typically used as the indicators for pollution by more serious disease-causing microorganisms. The Washington State Department of Ecology (Ecology) is made changes to the State Water Quality Standards that include the use of new bacterial indicators: *E. coli* for fresh water and enterococci for marine water will replace fecal coliform bacteria, except that fecal coliform will still be used for marine waters that contain shellfish beds.

Nutrients

In the context of water quality, nutrients are mainly compounds of nitrogen and phosphorus. When nutrients are allowed to enter water bodies, undesirable effects such as algae overgrowth, oxygen depletion, channel clogging due to overgrowth of vegetation, and fish and animal death can occur. Sources of nutrients can include fertilizers, failing septic systems, and yard and animal wastes.

Toxic Organic Compounds

A number of organic chemicals are toxic when they get into the aquatic environment. Many pesticides, herbicides, rodenticides, and fungicides are deadly to aquatic life. The same is true of compounds such as antifreeze, wood preservatives, cleansers, and a host of other, more exotic organics derived from industries or past practices (such as polychlorinated biphenyls [PCBs], DDT, and chlordane).

Other Chemicals and Substances

There are a host of other chemicals that can cause problems if allowed to enter the aquatic environment. Common household bleach can be deadly to fish and other critters if drained directly to water bodies. Diatomaceous earth backwash from swimming pool filters can clog gills and suffocate fish. Arsenic has been used in rat and mole killing compounds. Even those compounds classified as **biodegradable or environmentally friendly** can have devastating **immediate** effects on aquatic life.

What are Best Management Practices?

BMPs are a series of actions that are designed to reduce stormwater pollution. BMPs are separated into two broad categories, namely source control BMPs and treatment BMPs.

Source Control BMPs

As the name implies, source control BMPs prevent contamination from entering stormwater runoff by controlling them at the source. There are two categories of source control BMPs: operational and structural.

- Operational source control BMPs are considered to be the most cost effective pollutant minimization practices. Operational source control BMPs are nonstructural practices that prevent or reduce pollutants from entering stormwater. They can also include process changes such as raw material/product changes and recycling wastes. Examples include:
 - o Formation of a pollution prevention team
 - Good housekeeping practices
 - o Preventive maintenance procedures
 - o Spill prevention and clean up
 - Employee training
 - o Inspections of pollutant sources
 - o Record keeping.
- 2. Structural source control BMPs are physical, structural or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. Structural BMPs typically cost more to construct, operate, and maintain. Examples of structural source control BMPs typically include:
 - Enclosing and/or covering the pollutant source, i.e., within a building or other enclosure, a roof over storage and working areas, a temporary tarpaulin, etc.
 - Physically segregating the pollutant source to prevent run-on of uncontaminated stormwater
 - Devices that direct only contaminated stormwater to appropriate treatment BMPs, i.e., discharge to a
 - sanitary sewer if a permit is first obtained from the County Industrial Pretreatment Program at (253) 798-3013.

Treatment Best Management Practices

Treatment BMPs are utilized to treat stormwater that is already contaminated. Most treatment BMPs require planning, designing, permitting and construction, and none can remove 100 percent of the contaminants in stormwater. These factors, added to the typical expense of treatment BMPs, makes source control BMPs the preferred choice. There may, however, be some instances where treatment BMPs may be required. This volume identifies specific treatment BMPs that apply to particular pollutant sources, such as fueling stations, railroad yards, storage and transfer of materials, etc. After identifying the required treatment BMPs, the reader can refer to Volume I, Section 1.6 and Volume V for additional information about treatment BMPs.

Am I Exempted if I am Already Implementing Best Management Practices?

Businesses already implementing BMPs in accordance with other federal, state, or county programs usually do not have to implement additional BMPs. Persons or businesses qualifying for exemptions include:

• Businesses required to obtain a general or individual NPDES permit for stormwater discharges must comply with the requirements of that permit. See regulatory requirement R.2 in Chapter 6 of this volume for details.

If you are on the above list, the county assumes that you are implementing the appropriate BMPs. If the county finds that you have not implemented your BMPs, or that the BMPs that you have implemented are not effectively addressing the discharge of contaminants, then you may be required to implement additional BMPs to meet requirements. *Everyone* must implement BMPs, but how each business goes about it, and through which government program, may differ from business to business.

How Do I Get Started?

If you are a landlord, tenant, or owner of a single-family residence, proceed to Chapter 3 for BMPs that are recommended for you.

If you own a business or industry, complete the worksheet in Chapter 2. If you checked off any of the activities that are being performed outdoors, use the activity code on the worksheet to find the BMPs recommended for you in Chapter 4.

If you have questions, please contact Pierce County Surface Water Management at (253) 798-2725. They can provide assistance over the phone and also at your business site.

Some Important Requirements to Note

Under current state and county law, if you own commercial property and lease or rent it, you can be held responsible for water quality problems caused by your tenants. Make sure your tenants are informed of their responsibilities under the auspices of this manual and PCC, Title 11.05, *Illicit Stormwater Discharges*.

Another important requirement is the need for an accidental spill plan if your business has the potential for a spill. If you are currently under a pretreatment permit for discharge to sewers, it will probably require a minor amount of effort to amend it to include stormwater. Please contact Pierce County Surface Water Management at (253) 798-2725 for information on developing these plans.

You are responsible for obtaining prior approval for your stormwater discharge to the county system. This means obtaining proper building and environmental permits from the county and state. Please contact the Pierce County Planning and Land Services (PALS) at (253) 798-7200 for permit information. For Ecology permits, call (360) 407-6400.

Chapter 2 - Worksheet for Commercial and Industrial Activities

This worksheet is designed for use by business and industry operators. This worksheet and the BMPs are organized by the different activities that businesses perform. The goal of the BMPs is to assure that **nothing but uncontaminated stormwater be discharged** to the Pierce County stormwater drainage system. If you perform the listed activity indoors, controlling all discharges from the activity (e.g., process water, washwater, lubricants, solvents, fugitive dust, granular material, blow down waste, etc.) such that no exposure to stormwater occurs, then you do not have to institute new BMPs for that activity. Complete the entire worksheet by checking the appropriate boxes for all activities that take place at your work place. If you checked off any of the activities **that are being performed outdoors or can reach the stormwater drainage system**, use the activity code on the worksheet to find the BMPs recommended for you in Chapter 4.

If you checked off any of these activities that are occurring indoors at your business, then you are exempt from implementing BMPs, provided no indoor drains or processes can ultimately contact stormwater or be transported to surface waters such as rivers, lakes and streams. You must ensure that liquids, powders, dusts, and fine granular materials stay confined indoors; otherwise, you will be subject to all of the BMP requirements. For discharges to the sanitary sewer, permits must be obtained from the County Industrial Pretreatment Program at (253) 798-3013.

If you checked off any of these activities as occurring outdoors at your business, then use the activity code to find the appropriate BMPs described in Chapter 4.

If you have questions, please contact Pierce County Surface Water Management at (253) 798-2725. They can provide assistance over the phone and also at your business site.

Annex / LESA / 911 Comm Center

Activity Code	Type of Activity	Check if You Are Involved in This
A1.1	 Cleaning or Washing of Tools, Engines, and Manufacturing Equipment This includes parts washers and all types of manufactured equipment components. 	
A1.2	 Cleaning or Washing of Cooking Equipment This includes vents, filters, pots and pans, grills, and related items. 	
A1.3	Washing, Pressure Washing, and Steam Cleaning of Vehicles/Equipment/Building Structures This covers cleaning and washing at all types of establishments, including fleet vehicle yards, car dealerships, car washes, and maintenance facilities.	X
A1.4	Collection and Disposal of Wastewater from Mobile Interior Washing Operations • This includes carpet cleaners, upholstery cleaners, and drapery cleaners.	
A2.1	Loading and Unloading Areas for Liquid or Solid Material Loading and unloading of materials at industrial and commercial facilities.	X
A2.2	 Fueling at Dedicated Stations This includes gas stations, pumps at fleet vehicle yards or shops, and other privately owned pumps. 	
A2.3	 Engine Repair and Maintenance This covers oil changes and other engine fluids. 	
A2.4	 Mobile Fueling of Vehicles and Heavy Equipment Fleet fueling, wet fueling, and wet hosing. 	
A3.1	 Concrete and Asphalt Mixing and Production at Stationary Sites Applies to mixing of raw materials on site to produce concrete or asphalt. 	
A3.2	Concrete Pouring, Concrete Cutting, and Asphalt Application at Temporary Sites • This includes construction sites, and driveway and parking lot resurfacing.	
A3.3	 Manufacturing and Post Processing of Metal Products This includes machining, grinding, soldering, cutting, welding, quenching, rinsing, etc. 	
A3.4	 Wood Treatment Areas This includes wood treatment using pressure processes or by dipping or spraying. 	
A3.5	 Commercial Composting Includes commercial composting facilities operating outside. 	
A3.6	Landscaping and Vegetation Management Activities, Including Vegetation Removal, Herbicide and Insecticide Application, Fertilizer Application, Irrigation, Watering, Gardening, and Lawn Care Includes businesses involved in landscaping, applying pesticides and managing vegetation.	X

Activity Code	Type of Activity	Check if You Are Involved in This
A3.7	Painting, Finishing, and Coating of Vehicles, Boats, Buildings, and Equipment	
	 Includes surface preparation and the applications of paints, finishes, and/or coatings. 	
A3.8	Commercial Printing Operations	
	 Includes materials used in the printing process. 	
A3.9	Manufacturing Activities – Outside	
	Includes outdoor manufacturing areas.	
A3.10	Agricultural Crop Production	
	Includes commercial scale farming.	
A3.11	Application of Pesticides, Herbicides, Fungicides and Rodenticides for purposes other than landscaping	X
A 4 4	Includes moss removal and outdoor insect extermination. Outside Notice Containing the Property of th	
A4.1	Storage or Transfer (Outside) of Solid Raw Materials, By-products, or Finished Products	
A4.2	Storage and Treatment of Contaminated Soils	
	 This applies to contaminated soils that are excavated and left on site. 	
A4.3	Temporary Storage or Processing of Fruits or Vegetables	
	 This includes processing activities at wineries, fresh and frozen juice makers, and other food and beverage processing operations. 	
A4.4	Storage of Solid Wastes and Food Wastes	
	 This includes regular garbage and all other discarded non-liquid items. 	X
A4.5	Recyclers and Scrap Yards	
	 This includes scrapped equipment, vehicles, empty metal drums, and assorted recyclables. 	
A4.6	Treatment, Storage, or Disposal of Dangerous Wastes	
	 Refer to Ecology and the Tacoma-Pierce County Health Department for more information, see Chapter 6. 	
A4.7	Storage of Liquid, Food Waste, or Dangerous Waste Containers	
	 This includes containers located outside a building and used for temporary storage. 	
A4.8	Storage of Liquids in Permanent Aboveground Tanks • Includes all liquids in aboveground tanks.	X
110		^
A4.9	 Parking and Storage for Vehicles and Equipment Includes public and commercial parking lots 	X
A4.10	Storage of Pesticides, Fertilizers, or other products that can leach pollutants.	
A5.1	 Demolition of Buildings Applies to removal of existing buildings and subsequent clearing of the rubble. 	
A5.2	Building Repair, Remodeling, and Construction	
	 Applies to construction of buildings, general exterior building repair work and remodeling of buildings. 	X
A6.1	Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots	

Activity Code	Type of Activity	Check if You Are Involved in This
A6.2	Dust Control at Manufacturing Sites Includes grain dust, sawdust, coal, gravel, crushed rock, cement, and boiler fly ash.	
A6.3	 Soil Erosion and Sediment Control (ESC) at Industrial Sites Includes industrial activities that take place on soil. 	
A7.1	 Commercial Animal Handling Areas This includes kennels, fenced pens, veterinarians, and businesses that board animals. 	
A7.2	Keeping Livestock in Stables, Pens, Pastures or Fields • Applies to all types of livestock.	
A7.3	 Applies to log yards typically located at sawmills, ports, and pulp mills. 	
A7.4	Boat building, Mooring, Maintenance, and Repair This includes all types of maintenance, repair, and building operations.	
A7.5	 Applies to logging activities that fall under Class IV general forest practices. 	
A7.6	Mining and Quarrying of Sand, Gravel, Rock, Minerals, Peat, Clay, and Other Materials • This does not include excavation at construction sites.	
A7.7	Swimming Pool and Spa Cleaning and Maintenance This includes every swimming pool and spa not at a single family residence. Commercial pool cleaners are included here for all pools.	
A7.8	De-icing and Anti-icing Operations for Airports and Streets • Includes aircraft, runways/taxiways, streets and highways.	X
A7.9	 Roof and Building Drains at Manufacturing and Commercial Buildings These sites will be referred to the Puget Sound Clean Air Agency. 	
A7.10	Urban Streets • Includes recommended BMPs.	
A7.11	Railroad Yards	
A7.12	Maintenance of Public and Private Utility Corridors and Facilities Includes public and private utility maintenance activities.	
A7.13	Maintenance of Roadside Ditches	
A7.14	Maintenance of Stormwater Drainage and Treatment Facilities	X
A7.15	Spills of Oil and Hazardous Substances	

Revised by Rob Dudra, Pierce County Surface Water Management on 10/21/2011.

Annex / LESA / 911 Comm Center

Activity Code	Type of Activity	Check if You Are Involved in This
A1.1	Cleaning or Washing of Tools, Engines, and Manufacturing Equipment This includes parts washers and all types of manufactured equipment components.	
A1.2	 Cleaning or Washing of Cooking Equipment This includes vents, filters, pots and pans, grills, and related items. 	
A1.3	Washing, Pressure Washing, and Steam Cleaning of Vehicles/Equipment/Building Structures • This covers cleaning and washing at all types of establishments, including fleet vehicle yards, car dealerships, car washes, and maintenance facilities.	X
A1.4	Collection and Disposal of Wastewater from Mobile Interior Washing Operations • This includes carpet cleaners, upholstery cleaners, and drapery cleaners.	
A2.1	Loading and Unloading Areas for Liquid or Solid Material Loading and unloading of materials at industrial and commercial facilities.	х
A2.2	 Fueling at Dedicated Stations This includes gas stations, pumps at fleet vehicle yards or shops, and other privately owned pumps. 	
A2.3	 Engine Repair and Maintenance This covers oil changes and other engine fluids. 	
A2.4	Mobile Fueling of Vehicles and Heavy EquipmentFleet fueling, wet fueling, and wet hosing.	
A3.1	 Concrete and Asphalt Mixing and Production at Stationary Sites Applies to mixing of raw materials on site to produce concrete or asphalt. 	
A3.2	Concrete Pouring, Concrete Cutting, and Asphalt Application at Temporary Sites • This includes construction sites, and driveway and parking lot resurfacing.	X
A3.3	 Manufacturing and Post Processing of Metal Products This includes machining, grinding, soldering, cutting, welding, quenching, rinsing, etc. 	
A3.4	 Wood Treatment Areas This includes wood treatment using pressure processes or by dipping or spraying. 	
A3.5	 Commercial Composting Includes commercial composting facilities operating outside. 	
A3.6	Landscaping and Vegetation Management Activities, Including Vegetation Removal, Herbicide and Insecticide Application, Fertilizer Application, Irrigation, Watering, Gardening, and Lawn Care	X
	 Includes businesses involved in landscaping, applying pesticides and managing vegetation. 	

Activity Code	Type of Activity	Check if You Are Involved in This
A3.7	Painting, Finishing, and Coating of Vehicles, Boats, Buildings, and	
	 Includes surface preparation and the applications of paints, finishes, and/or coatings. 	X
A3.8	Commercial Printing Operations	
	 Includes materials used in the printing process. 	
A3.9	Manufacturing Activities – Outside	
	 Includes outdoor manufacturing areas. 	
A3.10	Agricultural Crop Production	
	Includes commercial scale farming.	
A3.11	Application of Pesticides, Herbicides, Fungicides and Rodenticides for purposes other than landscaping • Includes moss removal and outdoor insect extermination.	X
A 4 1		
A4.1	Storage or Transfer (Outside) of Solid Raw Materials, By-products, or Finished Products	
A4.2	Storage and Treatment of Contaminated Soils	
11.02	This applies to contaminated soils that are excavated and left on site.	
A4.3	Temporary Storage or Processing of Fruits or Vegetables	
	 This includes processing activities at wineries, fresh and frozen juice makers, and other food and beverage processing operations. 	
A4.4	Storage of Solid Wastes and Food Wastes	
	 This includes regular garbage and all other discarded non-liquid items. 	X
A4.5	Recyclers and Scrap Yards	
	 This includes scrapped equipment, vehicles, empty metal drums, and assorted recyclables. 	
A4.6	Treatment, Storage, or Disposal of Dangerous Wastes	
	 Refer to Ecology and the Tacoma-Pierce County Health Department for more information, see Chapter 6. 	
A4.7	Storage of Liquid, Food Waste, or Dangerous Waste Containers	
	This includes containers located outside a building and used for temporary storage.	
A4.8	Storage of Liquids in Permanent Aboveground Tanks	
	Includes all liquids in aboveground tanks.	X
A4.9	Parking and Storage for Vehicles and Equipment Includes public and commercial parking lots	X
A4.10	Storage of Pesticides, Fertilizers, or other products that can leach pollutants.	
A5.1	Demolition of Buildings Applies to removal of existing buildings and subsequent clearing of the rubble.	
A5.2	Building Repair, Remodeling, and Construction	
	 Applies to construction of buildings, general exterior building repair work and remodeling of buildings. 	X
A6.1	Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots	

Activity Code	Type of Activity	Check if You Are Involved in This
A6.2	Dust Control at Manufacturing Sites	
	 Includes grain dust, sawdust, coal, gravel, crushed rock, cement, and boiler fly ash. 	
A6.3	Soil Erosion and Sediment Control (ESC) at Industrial Sites • Includes industrial activities that take place on soil.	
A7.1	Commercial Animal Handling Areas	
A/.1	This includes kennels, fenced pens, veterinarians, and businesses that board animals.	
A7.2	Keeping Livestock in Stables, Pens, Pastures or Fields	
	Applies to all types of livestock.	
A7.3	Log Sorting and Handling	
70	Applies to log yards typically located at sawmills, ports, and pulp mills.	
A7.4	Boat building, Mooring, Maintenance, and Repair	
	 This includes all types of maintenance, repair, and building operations. 	
A7.5	Logging	-
	 Applies to logging activities that fall under Class IV general forest practices. 	
A7.6	Mining and Quarrying of Sand, Gravel, Rock, Minerals, Peat, Clay, and Other Materials	
	This does not include excavation at construction sites.	
A7.7	Swimming Pool and Spa Cleaning and Maintenance	
	 This includes every swimming pool and spa not at a single family residence. Commercial pool cleaners are included here for all pools. 	
A7.8	De-icing and Anti-icing Operations for Airports and Streets Includes aircraft, runways/taxiways, streets and highways.	X
A7.9	Roof and Building Drains at Manufacturing and Commercial Buildings • These sites will be referred to the Puget Sound Clean Air Agency.	
A7.10	Urban Streets • Includes recommended BMPs.	
A7.11	Railroad Yards	
A7.12	Maintenance of Public and Private Utility Corridors and Facilities	
	Includes public and private utility maintenance activities.	
A7.13	Maintenance of Roadside Ditches	
A7.14	Maintenance of Stormwater Drainage and Treatment Facilities	X
A7.15	Spills of Oil and Hazardous Substances	

Site assessment performed by Corrie Smith, Pierce County Surface Water Management on 10/04/10

Material Inventory	Worksheet #3 Provided By: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Assistant Municipal Stormwater Permit Coordinator Date: 10/27/2010

List materials handled, treated, stored, or disposed of at the site that may potentially be exposed to precipitation or runoff. Also indicate if any spills or leaks of pollutants have occurred during the three years prior to the effective date of the permit. (Include any pollutants no longer handled on-site.)

Past	Spill?		No	No					
Exposed? Likelihood of Contact	with Stormwater?	(If yes ,describe reason)	No	No					
Exposed?	ı		Yes	Yes					
Quantity	Stored	(gal./ lb.)	500 gal						
Location			Above Ground Tank by LESA Bldg	Dumpster/ Compactor: Refuse Storage Area					
Material			Diesel Fuel	Commercial Office Refuse					

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Site Map(s)	Worksheet #4 Dravided Ry: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Assistant Municipal Stormwater Permit Coordinator Date: 10/27/2010

(ADD SITE MAP(S) BEHIND THIS SHEET)

ANNEX/ LESA/ 911 COMM CENTER OUTFALL IDENTIFICATION MAP - 2010

2401 S 35TH STREET TACOMA, WA

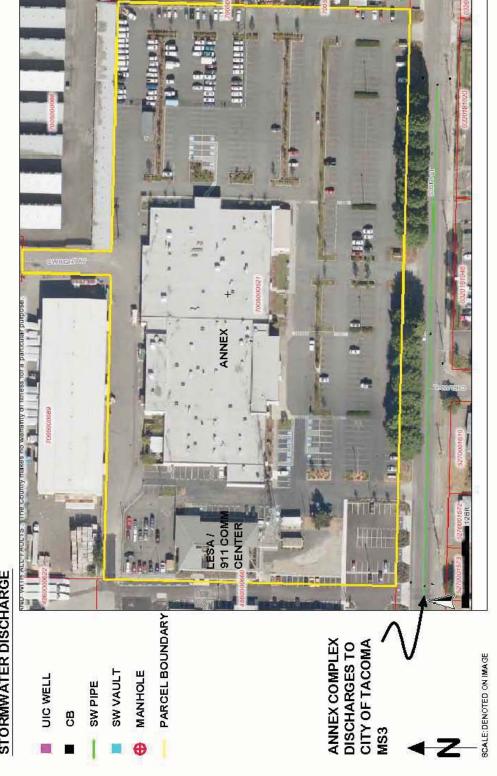




ANNEX / LESA / 911 COMM CENTER COMPLEX VICINITY MAP

2401 S 35TH STREET TACOMA, WA

STORMWATER DISCHARGE

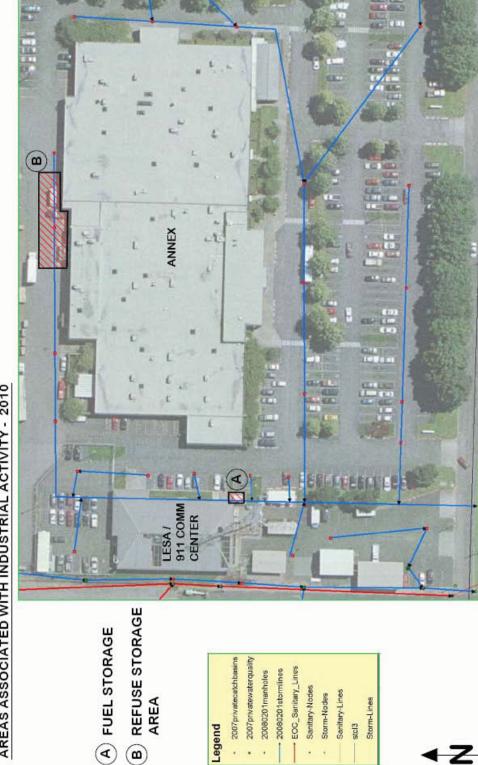


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ANNEX / LESA / 911 COMM CENTER COMPLEX SITE MAP

2401 S 35TH STREET TACOMA, WA

AREAS ASSOCIATED WITH INDUSTRIAL ACTIVITY - 2010



2007 privatewaterquality 2007privatecatchbasin

Legend

AREA

8

EOC_Sanitary_Lines 20080201stornlines 20080201manholes

Sanitary-Nodes

Sanitary-Lines Storm-Nodes

Storm-Lines stcl3



SCALE:NTS

STORMWATER MAPPING PROVIDED BY CITY OF TACOMA

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Identify Areas Associated With Industrial Activity	nter
ated With	Annex / LESA / 911 Comm Center
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Worksheet #5
Provided By: Rob Dudra
Title: Assistant Municipal Stormwater Permit Coordinator
Date: 10-28-2010

List areas and activities which may be sources of pollution. Indicate by letter reference (i.e. A,B,C...) on Site Map (contents of Worksheet #4.) Provide the potential of these areas and activities as pollutant sources identifying any pollutant that may be generated by that activity.

Industrial Area or Activity	Potential Stormwater Pollutant from Area or	Likelihood of Being Present in your Stormwater
	Activity	Discharge? (If yes, describe reason)
A. Fuel Storage	Diesel Fuel (spill containment products proximal)	No
B. Refuse Storage	Leachate from Refuse (Covered Dumpster &	No
	Compactor)	

Worksheet #6 Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

Description of Exposed Significant Material

Annex / LESA / 911 Comm Center

Based on your material inventory, list significant materials that have been exposed since November 18,1989, and/or are currently exposed.

List of Exposed Significant	Period of	Quantity	Location	Method of Storage, Handling, Treatment or Disposal
Materials	Exposure	Exposed* (gal./lb.)		
Diesel Fuel	Constant	<500 gal	Ground Tank by SSA Bldg	Double Wall Tank; Filled Annually
Commercial Office Refuse	Constant	10yds.	Dumpster/ Compactor: Refuse Storage Area	Contracted Disposal

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List of Significant Spills and Leaks

Annex / LESA / 911 Comm Center

Worksheet #7 Completed By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

	Amount of Material no MaterialMaterial nongerPreventive Measure TakenRecovered exposed?exposed?(gals/lbs)(yes/no)	n/a	
Procedure	Material no longer exposed? (yes/no)	n/a	
Response	Amount of Material Recovered (gals/lbs)	n/a	
	Reason for Spill/ leak	n/a	
	Source, If known	n/a	
Description	Quantity (gal./lb.)	n/a	
	Type of Material	n/a	
	Location	None	
	Date MM/DD/YY	10/04/2010 None	

of three years prior to the effective date of this Permit. Significant spills and leaks include but are not limited to, release of List all spills and leaks (as indicated on Worksheet #3) of toxic or hazardous pollutants that were significant after the date oil or hazardous substances in excess of reportable quantities. Although not required, we suggest you list spills and leaks of non-hazardous materials.

Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator	Date: 10-28-2010
Inspections (refer to Tab 12)	Annex / LESA / 911 Comm Center

Pierce County Surface Water Management (PC/SWM) staff will perform:

(1) Wet Season (September 1st to April 30th) Inspection

and

(1) Dry Season (May 1st to August 31st) Inspection

Non-Stormwater Discharge	Worksheet #9
Dry Weather (May to September 30)	Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator
Assessment & Certification	Date: 10-28-2010
Annex / LESA / 911 Comm Center	

Tests may include: visual observation of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

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Annex / LESA / 911 Comm Center

From: PC Stormwater & Site Development Manual 2008 Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

(INDIVIDUAL BMPs BEHIND THIS SHEET)

A1.3 Washing, Pressure Washing, and Steam Cleaning of Vehicles/Equipment/Building Structures

Description of Pollutant Sources: Vehicles, aircraft, vessels, carpets, industrial equipment, and large buildings may be commercially cleaned with low or high pressure water or steam. This includes frequent "charity" car washes at gas stations and commercial parking lots. The cleaning can include hand washing, scrubbing, sanding, etc. Washwater from cleaning activities can contain oil and grease, suspended solids, heavy metals, soluble organics, soaps, and detergents that can contaminate stormwater.

Pollutant Control Approach: The preferred approach is to cover and/or contain the cleaning activity, or conduct the activity inside a building, to separate the uncontaminated stormwater from the pollutant sources. Contact the Pierce County Industrial Pretreatment Program (253) 798-3013 for advice and consultation on appropriate treatment and for approvals to discharge to sanitary sewer. Washwater must be conveyed to a sanitary sewer after approval by the Pierce County Industrial Pretreatment Program, temporarily stored before proper disposal, or recycled, with no discharge to the ground, a storm drain, or surface water. Washwater may be discharged to the ground after proper treatment in accordance with *Ecology guidance WQ-R-95-56, "Vehicle and Equipment Washwater Discharges," June 1995.* The quality of any discharge to the ground after proper treatment must comply with Ecology's Ground Water Quality Standards, Chapter 173-200 WAC. Contact the Ecology Southwest Regional Office for an NPDES permit application for discharge of washwater to surface water or to a storm drain after onsite treatment.

Required BMPs

Conduct vehicle/equipment washing in one of the following locations:

- At a commercial washing facility in which the washing occurs in an enclosure and drains to the sanitary sewer, or
- In a building constructed specifically for washing of vehicles and equipment, which drains to a sanitary sewer.

Conduct outside washing operation in a designated wash area with the following features:

• In a paved area, constructed as a spill containment pad to prevent the runon of stormwater from adjacent areas. Slope the spill containment area so that washwater is collected in a containment pad drain system with perimeter drains, trench drains, or catchment drains. Size the containment pad to extend out a minimum of four feet on all sides of the vehicles and/or equipment being washed.

- Convey the washwater to a sump (like a grit separator) and then to a sanitary sewer (if allowed by the Pierce County Sewer Utility), or other appropriate wastewater treatment or recycle system. An NPDES permit may be required for any washwater discharge to a storm drain or receiving water after treatment. Contact the Ecology Southwest Regional Office for NPDES permit requirements.
- Any discharge to the sanitary sewer requires the approval of Industrial Pretreatment Program at (253) 798-3013 Contact the utility for details on approved systems.

Suggested BMPs

• The wash area should be well marked at gas stations, multifamily residences, and any other business where non-employees wash vehicles.

Note that the purpose of the

 For uncovered wash pads, the positive control outlet valve may be manually operated, but a pneumatic Note that the purpose of the valve is to convey only washwater and contaminated stormwater to a treatment system.

or

electric valve system is preferable. The valve may be on a timer circuit where it is opened upon completion of a wash cycle. The timer would then close the valve after the sump or separator is drained.

- Use phosphate-free biodegradable detergents when practicable.
- Consider recycling the washwater.
- Because soluble/emulsifiable detergents can be used in the wash medium, the selection of soaps and detergents and treatment BMPs should be considered carefully. Oil/water separators are ineffective in removing emulsified or water soluble detergents.
- At commercial parking lots, where it is not possible to discharge the washwater to a sanitary sewer, a temporary plug or a temporary sump pump can be used at the storm drain to collect the washwater for offsite disposal.

Charity car washes are not allowed to discharge washwater to the county stormwater drainage system. For optional fund-raiser information, contact the Puget Sound Car Wash Association at (800) 509-9274. Online, visit: www.charitycarwash.org.

• New and used car dealerships may wash vehicles in the parking stalls without soap, or if an approved treatment system for the washwater is in place.

At industrial sites contact the Ecology Southwest Regional Office for NPDES permit requirements even if soaps, detergents, and/or other chemical cleaners are not used in washing trucks.

A2.1 Loading and Unloading Areas for Liquid or Solid Material

Description of Pollutant Sources: Loading/unloading of liquid and solid materials at industrial and commercial facilities is typically conducted at shipping and receiving, outside storage, fueling areas, etc. Materials transferred can include products, raw materials, intermediate products, waste materials, fuels, scrap metals, etc. Leaks and spills of fuels, oils, powders, organics, heavy metals, salts, acids, alkalis, etc. during transfer are potential causes of stormwater contamination. Spills from hydraulic line breaks are a common problem at loading docks.

Pollutant Control Approach: Cover and contain the loading/ unloading area where necessary to prevent run-on of stormwater and runoff of contaminated stormwater.

Required BMPs

At All Loading/Unloading Areas:

- A significant amount of debris can accumulate at outside, uncovered loading/unloading areas. Sweep these surfaces frequently to remove material that could otherwise be washed off by stormwater. Sweep outside areas that are covered for a period of time by containers, logs, or other material after the areas are cleared.
- Place drip pans, storm drain covers or other appropriate temporary containment devices at locations where leaks or spills may occur such as hose connections, hose reels, and filler nozzles. Drip pans shall always be used when making and breaking connections (Figure 4.4). Check loading/unloading equipment such as valves, pumps, flanges, and connections regularly for leaks and repair as needed.
 - Consistent with Uniform Fire Code requirements and to the extent practicable, conduct unloading or loading of solids and liquids in a manufacturing building or under a roof, lean-to, or other appropriate cover.
 - Berm, dike, and/or slope the loading/unloading area to prevent run-on of stormwater and to prevent the runoff or loss of any spilled material from the area.
 - Large loading areas frequently are not curbed along the shoreline. As a result, stormwater passes directly off the paved surface into surface water. Place curbs along the edge, or slope the edge such that the stormwater can flow to an internal stormwater drainage system that leads to an approved treatment BMP.

• Pave and slope loading/unloading areas to prevent the pooling of water. The use of catch basins and drain lines within the interior of the paved area must be minimized as they will frequently be covered by material, or they should be placed in designated "alleyways" that are not covered by material, containers, or equipment.



(Photo courtesy of Mark Dilley, Interstate Products, Inc.)

Figure 4.4. Drip Pan for Connections at Loading and Unloading Areas for Liquid Material.

- To minimize the risk of accidental spillage, prepare an "Operations Plan" that describes procedures for loading/unloading. Train the employees, especially fork lift operators, in its execution and post it or otherwise have it readily available to employees and regulatory officials.
- Report spills of reportable quantities to Ecology Southwest Regional Office (refer to Chapter 7 for telephone number).
- Prepare and implement an emergency spill cleanup plan for the facility (BMP A7.14 Spills of Oil and Hazardous Substances) which includes the following BMPs:
 - Ensure cleanup of liquid/solid spills in the loading/unloading area immediately if a significant spill occurs, upon completion of the loading/unloading activity, or at the end of the working day.

- Retain and maintain an appropriate oil spill cleanup kit on site for rapid cleanup of material spills (see BMP A7.14 Spills of Oil and Hazardous Substances).
- Ensure that an employee trained in spill containment and cleanup is present during loading/unloading.

At Rail Transfer Areas to Above/Below-ground Storage Tanks:

• Install a drip pan system as illustrated (Figure 4.4) within the rails to collect spills/leaks from tank cars and hose connections, hose reels, and filler nozzles.

Loading/Unloading from/to Marine Vessels:

• Facilities and procedures for the loading or unloading of petroleum products must comply with Coast Guard requirements.

Transfer of Small Quantities from Tanks and Containers:

• Refer to BMPs A4.8 Storage of Liquids in Permanent Aboveground Tanks and A4.7 Storage of Liquid, Food Waste, or Dangerous Waste Containers for requirements on the transfer of small quantities from tanks and containers, respectively.

Suggested BMPs

• For the transfer of pollutant liquids in areas that cannot contain a catastrophic spill, install an automatic shutoff system in case of unanticipated off-loading interruption (e.g., coupling break, hose rupture, overfill, etc.).

At Loading and Unloading Docks:

- Install/maintain overhangs or door skirts that enclose the trailer end (Figures 4.5 and 4.6) to prevent contact with rainwater.
- Design the loading/unloading area with berms, sloping, etc. to prevent the run-on of stormwater.
- Retain on site the necessary materials for rapid cleanup of spills.



Figure 4.5. Loading Docks with an Overhang to Prevent Material Contact with Rainwater.



Figure 4.6. Door Skirts to Enclose the Trailer End of a Truck to Prevent Material Contact with Rainwater.

At Tanker Truck Transfer Areas to Above/Below-Ground Storage Tanks:

- Pave the area on which the transfer takes place. If any transferred liquid, such as gasoline, is reactive with asphalt, pave the area with Portland cement concrete.
- Slope, berm, or dike the transfer area to a dead-end sump, spill containment sump, spill control oil/water separator, or other spill control device. The minimum spill retention time should be 15 minutes at the highest fuel dispenser nozzle through-put rate or the peak flow rate of the 6-month, 24-hour storm event over the surface of the containment pad, whichever is greater. The volume of the spill containment sump should be a minimum of 50 gallons with an adequate grit sedimentation volume.

A3.2 Concrete Pouring, Concrete Cutting, and Asphalt Application at Temporary Sites

Description of Pollutant Sources: This activity applies to businesses and public agencies that apply asphalt or pour or cut concrete for building construction and remodeling, road construction, sidewalk, curb and gutter repairs and construction, sealing of driveways and roofs, and other applications. These activities are typically done on a temporary site-to-site basis where permanent BMP measures do not apply. Concrete pouring activities can not only severely alter the pH of receiving waters, but slurry from aggregate washing can harden in storm pipes, thus reducing capacity and creating flooding problems.

Pollutants of concern include toxic hydrocarbons, toxic organic compounds, oils and greases, heavy metals, suspended solids, and pH.

Pollutant Control Approach: Train employees on proper procedures, sweep or shovel aggregate chunks, collect accumulated runoff and solids, and wash equipment in designated areas.

Required BMPs

The following BMPs or equivalent measures are required of all businesses and agencies doing concrete pouring and asphalt application at temporary sites:

- Employees must be educated on the pollution hazards of concrete and asphalt application and cutting.
- Loose aggregate chunks and dust must be swept or shoveled and collected (not hosed down a storm drain) for recycling or proper disposal at the end of each workday, especially at work sites such as streets, driveways, parking lots, sidewalks, curbs, and gutters where rain can readily pick up the loose material and carry it to the nearest stormwater conveyance. Small amounts of excess concrete, grout, and mortar can be disposed of in the trash.
- Storm drain covers or similarly effective containment devices must be placed over all nearby drains at the beginning of each day. Shovel or vacuum slurry and remove from the site. All accumulated runoff and solids must be collected and properly disposed of (see BMP S.2 in Chapter 5 for disposal options) at the end of each workday, or more often if necessary.
- Exposed aggregate washing, where the top layer of unhardened concrete is hosed or scraped off to leave a rough finish, must be done with a mechanism for containment and collection of the discarded concrete slurry (such as the storm drain covers mentioned above). The easiest way to contain the washwater will be to direct the washings to a hole in the ground where the water can percolate into the ground and the solids later covered with soil.

• Cleaning of concrete application and mixing equipment or concrete vehicles on the work site must be done in a designated area where the rinse water is controlled. The rinse water must either be collected for proper disposal or put into a hole in the ground where the water can percolate away and the solids later covered with soil or recovered and disposed of or recycled.

The use of any treatment BMP must not result in the violation of groundwater or surface water quality standards.

Suggested BMPs

- Avoid the activity when rain is occurring or expected.
- If possible, portable asphalt mixing equipment should be covered by an awning, a lean-to, or another simple structure to avoid contact with rain. See BMP S.4 in Chapter 5 for further details on cover structures.
- Recycle broken concrete and asphalt. Look under Recycling Services in the Yellow Pages of the phone book to find the recycler nearest you.

A3.6 Landscaping and Lawn/Vegetation Management

Description of Pollutant Sources: Landscaping can include grading, soil transfer, vegetation removal, pesticide and fertilizer application, and watering. Stormwater contaminants include toxic organic compounds, heavy metals, oils, total suspended solids, coliform bacteria, fertilizers, and pesticides.

Lawn and vegetation management can include control of objectionable weeds, insects, mold, bacteria, and other pests with chemical pesticides and is conducted commercially at commercial, industrial, and residential sites. Examples include weed control on golf course lawns, access roads, and utility corridors and during landscaping; sap stain and insect control on lumber and logs; rooftop moss removal; killing nuisance rodents; fungicide application to patio decks; and residential lawn/plant care. Toxic pesticides such as pentachlorophenol, carbamates, and organometallics can be released to the environment by leaching and dripping from treated parts, container leaks, product misuse, and outside storage of pesticide contaminated materials and equipment. Poor management of the vegetation and poor application of pesticides or fertilizers can cause appreciable stormwater contamination.

Pollutant Control Approach: Control of fertilizer and pesticide applications, soil erosion, and site debris to prevent contamination of stormwater.

Develop and implement an integrated pest management plan and use pesticides only as a last resort. Refer to Appendix IV-B Example of an Integrated Pest Management Program for more information. If pesticides/herbicides are used they must be carefully applied in accordance with label instructions on U.S. EPA registered materials. Maintain appropriate vegetation, with proper fertilizer application where practicable, to control erosion and the discharge of stormwater pollutants. Where practicable, grow plant species appropriate for the site, or adjust the soil properties of the subject site to grow desired plant species.

Required BMPs for Landscaping

- Do not dispose of collected vegetation into waterways or stormwater drainage systems.
- Use mulch or other erosion control measures when soils are exposed for more than 1 week during the dry season or 2 days during the rainy season.
- If oil or other chemicals are handled, store and maintain appropriate oil and chemical spill cleanup materials in readily accessible locations.

 Ensure that employees are familiar with proper spill cleanup procedures.

Suggested BMPs for Landscaping

- Conduct mulch-mowing whenever practicable.
- Install engineered soil/landscape systems to improve the infiltration and regulation of stormwater in landscaped areas.

- Dispose of grass clippings, leaves, sticks, or other collected vegetation by composting, if feasible.
- Till fertilizers into the soil rather than dumping or broadcasting onto the surface. Determine the proper fertilizer application for the types of soil and vegetation encountered.
- Till a topsoil mix or composted organic material into the soil to create a well-mixed transition layer that encourages deeper root systems and drought-resistant plants.
- Use manual and/or mechanical methods of vegetation removal rather than applying herbicides, where practical.

Required BMPs for the Use of Pesticides

- Develop and implement an IPM plan (see section on integrated pest management below) and use pesticides only as a last resort.
- Implement a pesticide-use plan and include at a minimum: a list of selected pesticides and their specific uses; brands, formulations, application methods, and quantities to be used; equipment use and maintenance procedures; safety, storage, and disposal methods; and monitoring, record keeping, and public notice procedures. All procedures shall conform to the requirements of Chapter 17.21 Revised Code of Washington (RCW) and Chapter 16-228 WAC.
- Choose the least toxic pesticide available that is capable of reducing the infestation to acceptable levels. The pesticide should readily degrade in the environment and/or have properties that strongly bind it to the soil. Any pest control used should be conducted at the life stage when the pest is most vulnerable. For example, if it is necessary to use a Bacillus thuringiensis application to control tent caterpillars, it must be applied before the caterpillars cocoon or it will be ineffective. Any method used should be site-specific and not used wholesale over a wide area.
- Apply the pesticide according to label directions. Under no conditions shall pesticides be applied in quantities that exceed manufacturer's instructions.
- Mix the pesticides and clean the application equipment in an area where accidental spills will not enter surface or groundwater, and will not contaminate the soil.
- Store pesticides in enclosed areas or in covered impervious containment. Ensure that pesticide contaminated stormwater or spills/leaks of pesticides are not discharged to storm drains. Do not hose down paved areas to a

- storm drain or conveyance ditch. Store and maintain appropriate spill cleanup materials in a location known to all near the storage area.
- Cleanup any spilled pesticides and ensure that the pesticide contaminated waste materials are kept in designated covered and contained areas.
- The pesticide application equipment must be capable of immediate shutoff in the event of an emergency.
- Do not spray pesticides within 100 feet of open waters including wetlands; ponds; and streams, sloughs, and any drainage ditch or channel that leads to open water, except when approved by Ecology or by Pierce County. All sensitive areas including wells, creeks, and wetlands must be flagged prior to spraying.
- As required by Pierce County or by Ecology, complete public posting of the area to be sprayed prior to the application.
- Spray applications should only be conducted during weather conditions as specified in the label direction and applicable local and state regulations.
 Do not apply during rain or immediately before expected rain.

Suggested BMPs for the Use of Pesticides

- Consider alternatives to the use of pesticides such as covering or harvesting weeds, substitute vegetative growth, and manual weed control/moss removal.
- Consider the use of soil amendments, such as compost, that are known to control some common diseases in plants, such as Pythium root rot, ashy stem blight, and parasitic nematodes. The following are three possible mechanisms for disease control by compost addition (USEPA publication 530-F-9-044):
 - Successful competition for nutrients by antibiotic production
 - Successful predation against pathogens by beneficial microorganism;
 and
 - Activation of disease-resistant genes in plants by composts.

Installing an amended soil/landscape system can preserve both the plant system and the soil system more effectively. This type of approach provides a soil/landscape system with adequate depth, permeability, and organic matter to sustain itself and continue working as an effective stormwater infiltration system and a sustainable nutrient cycle.

• Once a pesticide is applied, its effectiveness should be evaluated for possible improvement. Records should be kept showing the applicability and inapplicability of the pesticides considered.

- An annual evaluation procedure should be developed including a review of the effectiveness of pesticide applications, impact on buffers and sensitive areas (including potable wells), public concerns, and recent toxicological information on pesticides used/proposed for use. If individual or public potable wells are located in the proximity of commercial pesticide applications, contact the regional Ecology hydrogeologist to determine if additional pesticide application control measures are necessary.
- Rinsate from equipment cleaning and/or triple-rinsing of pesticide containers should be used as product or recycled into product.

For more information, contact the WSU Extension Home-Assist Program at (253) 445-4556; Bio-Integral Resource Center (BIRC), P.O. Box 7414, Berkeley, CA 94707; or Ecology to obtain "Hazardous Waste Pesticides" (publication No. 89-41); contact U.S. EPA to obtain a publication entitled "Suspended, Canceled and Restricted Pesticides" which lists all restricted pesticides and the specific uses that are allowed. Valuable information from these sources may also be available on the Internet.

Suggested BMPs for Vegetation Management

- Use at least an 8-inch "topsoil" layer with at least 8 percent organic matter to provide a sufficient vegetation-growing medium. Amending existing landscapes and turf systems by increasing the percent organic matter and depth of topsoil can substantially improve the permeability of the soil, improve the disease and drought resistance of the vegetation, and reduce fertilizer demand. This reduces the demand for fertilizers, herbicides, and pesticides. Organic matter is the least water-soluble form of nutrients that can be added to the soil. Composted organic matter generally releases only between 2 and 10 percent of its total nitrogen annually, and this release corresponds closely to the plant growth cycle. If natural plant debris and mulch are returned to the soil, this system can continue recycling nutrients indefinitely.
- Select the appropriate turfgrass mixture for your climate and soil type. Certain tall fescues and rye grasses resist insect attack because the symbiotic endophytic fungi found naturally in their tissues repel or kill common leaf and stem-eating lawn insects. They do not, however, repel root-feeding lawn pests such as Crane Fly larvae, and are toxic to ruminants such as cattle and sheep. The fungus causes no known adverse effects to the host plant or to humans. Endophytic grasses are commercially available and can be used in areas such as parks or golf courses where grazing does not occur. The local Cooperative Extension office can offer advice on which types of grass are best suited to the area and soil type.

- Use the following seeding and planting BMPs, or equivalent BMPs, to obtain information on grass mixtures, temporary and permanent seeding procedures, maintenance of a recently planted area, and fertilizer application rates: Temporary Seeding, Mulching, and Matting; Clear Plastic Covering; Permanent Seeding and Planting; and Sodding as described in Volume II, Construction Stormwater Pollution Prevention.
- Selection of desired plant species can be made by adjusting the soil properties of the subject site. For example, a constructed wetland can be designed to resist the invasion of reed canary grass by layering specific strata of organic matters (e.g., compost forest product residuals) and creating a mildly acidic pH and carbon-rich soil medium. Consult a soil restoration specialist for site-specific conditions.
- Aerate lawns regularly in areas of heavy use, where the soil tends to become compacted. Aeration should be conducted while the grasses in the lawn are growing most vigorously. Remove layers of thatch greater than 3/4-inch deep.
- Mowing is a stress-creating activity for turfgrass. When grass is mowed too short, its productivity is decreased and there is less growth of roots and rhizomes. The turf becomes less tolerant of environmental stresses, more disease prone, and more reliant on outside means such as pesticides, fertilizers, and irrigation to remain healthy. Set the mowing height at the highest acceptable level and mow at times and intervals designed to minimize stress on the turf. Generally mowing only one-third of the grass blade height will prevent stressing the turf.

Suggested BMPs for Irrigation

• The depth from which a plant normally extracts water depends on the rooting depth of the plant. Appropriately irrigated lawn grasses normally root in the top 6 to 12 inches of soil; lawns irrigated on a daily basis often root only in the top 1 inch of soil. Improper irrigation can encourage pest problems, leach nutrients, and make a lawn completely dependent on artificial watering. The amount of water applied depends on the normal rooting depth of the turfgrass species used, the available water holding capacity of the soil, and the efficiency of the irrigation system. Consult with Tacoma Water, the Pierce Conservation District, or Cooperative Extension office to help determine optimum irrigation practices.

Suggested BMPs for Fertilizer Management

• Turfgrass is most responsive to nitrogen fertilization, followed by potassium and phosphorus. Fertilization needs vary by site depending on plant, soil, and climatic conditions. Evaluation of soil nutrient levels through regular testing ensures the best possible efficiency and economy

- of fertilization. For details on soils testing, contact the Pierce Conservation District or Cooperative Extension Service.
- Fertilizers should be applied in amounts appropriate for the target vegetation and at the time of year that minimizes losses to surface and groundwater. Do not fertilize during a drought or when the soil is dry. Alternatively, do not apply fertilizers within 3 days prior to predicted rainfall. The longer the period between fertilizer application and either rainfall or irrigation, the less fertilizer runoff occurs.
- Use slow release fertilizers such as methylene urea, IDBU, or resin coated fertilizers when appropriate, generally in the spring. Use of slow release fertilizers is especially important in areas with sandy or gravelly soils.
- Time the fertilizer application to periods of maximum plant uptake. Generally fall and spring applications are recommended, although WSU turf specialists recommend four fertilizer applications per year.

Properly trained persons should apply all fertilizers. At commercial and industrial facilities, fertilizers should not be applied to grass swales, filter strips, or buffer areas that drain to sensitive water bodies unless approved by the County.

Suggested BMPs for IPM

An integrated pest management program might consist of the following steps:

- Step 1 Correctly identify problem pests and understand their life cycle.
- Step 2 Establish tolerance thresholds for pests.
- Step 3 Monitor to detect and prevent pest problems.
- Step 4 Modify the maintenance program to promote healthy plants and discourage pests.
- Step 5 Use cultural, physical, mechanical, or biological controls first if pests exceed the tolerance thresholds.
- Step 6 Evaluate and record the effectiveness of the control and modify maintenance practices to support lawn or landscape recovery and prevent recurrence.

For an elaboration of these steps refer to Appendix IV-B, Example of an IPM Program.

A3.7 Painting, Finishing, and Coating of Vehicles, Boats, Buildings, and Equipment

Description of Pollutant Sources: Surface preparation and the application of paints, finishes, and/or coatings to vehicles, boats, buildings, and/or equipment outdoors can be sources of pollutants. Potential pollutants include organic compounds, oils and greases, heavy metals, and suspended solids.

Pollutant Control Approach: Cover and contain painting and sanding operations and apply good housekeeping and preventive maintenance practices to prevent the contamination of stormwater with painting oversprays and grit from sanding.

Required BMPs

- Train employees in the careful application of paints, finishes, and coatings to reduce misuse and overspray. Use ground or drop cloths underneath outdoor painting, scraping, sandblasting work, and properly clean and temporarily store collected debris daily.
- Do not conduct spraying, blasting, or sanding activities over open water or where wind may blow paint or waste into water.
- Wipe up spills with rags and other absorbent materials immediately. Do not hose down the area to a storm drain, receiving water, or conveyance ditch to receiving water.
- On marine dock areas, sweep rather than hose down debris. Collect any hose water generated and convey to appropriate treatment and disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control device if dust, grit, washwater, or other pollutants may escape the work area and enter a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated runoff and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.
- Use a ground cloth, pail, drum, drip pan, tarpaulin, or other protective device for activities such as paint mixing and tool cleaning outside or where spills can contaminate stormwater.
- Properly dispose of all wastes and prevent all uncontrolled releases to the air, ground, or water.
- Clean brushes and tools covered with non-water-based paints, finishes, or other materials in a manner that allows collection of used solvents (e.g., paint thinner, turpentine, xylol, etc.) for recycling or proper disposal.

- Store toxic materials under cover (tarpaulin, etc.) during precipitation events and when not in use to prevent contact with stormwater.
- Enclose and/or contain all work while using a spray gun or conducting sand blasting and in compliance with applicable Puget Sound Air Pollution Control Agency Air Quality (PSAPCA), Occupational Safety and Health Administration (OSHA), and Washington Industrial Safety and Health Act (WISHA) requirements. Do not conduct outside spraying, grit blasting, or sanding activities during windy conditions which render containment ineffective.

Suggested BMPs

- Incidental cleaning of paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain.
- Recycle paint, paint thinner, solvents, pressure washwater, and any other recyclable materials.
- Use efficient spray equipment such as electrostatic, air-atomized, high volume/low pressure, or gravity feed spray equipment.
- Purchase recycled paints, paint thinner, solvents, and other products if feasible.

A3.11 Application of Pesticides, Herbicides, Fungicides, and Rodenticides for Purposes Other than Landscaping

This activity applies to businesses and government agencies using pesticides, herbicides, fungicides and rodenticides for purposes such as removing moss from rooftops or decks, killing nuisance rodents and some insects (such as termites and carpenter ants) that live outdoors but can invade the home if left unchecked. Businesses and government agencies involved in these activities must comply with Tacoma-Pierce County Health Department regulations and Washington State Department of Agriculture pesticide regulations. See Chapter 6 for more information on these regulations. The BMPs listed are intended to complement other regulations. Application of pesticides for landscaping purposes must follow the BMPs discussed under A3.6 Landscaping and Lawn/Vegetation Management.

Pollutants of Concern: Toxic organic compounds, oils, heavy metals, Chemical oxygen demand (COD)

Required BMPs

The following BMPs or equivalent measures are required of all businesses and agencies applying pesticides, herbicides, fungicides and rodenticides for non-landscaping purposes:

- Proper application practices must be used to avoid excessive application. Follow the manufacturers' guidelines and directions carefully.
- Never apply pesticides, herbicides, fungicides or rodenticides when rain is expected, or during rain events.
- Do not apply chemicals when it is windy. Early morning is typically the calmest time of day.
- Employees must be educated regarding the pollution potential of misusing the chemicals they are working with.
- Manage residues properly. Triple rinse or pressure rinse empty containers and mixing and application equipment. Collect all rinse water, and use it for diluting the next batch.

Suggested BMPs

- Use manual pest control measures, such as scraping or using high-pressure sprayers to remove moss from roofs and decks, before resorting to chemicals. Rodent traps can also be highly effective, without endangering pets and children as chemical baits can.
- IPM is a comprehensive approach to the use of pesticides. Integrated pest management minimizes pesticide application and stresses selection of proper products and tailored application rates. It is a sensible long-term strategy rather than a hit-and-run operation, and as such is probably the

most effective BMP measure that can be utilized under this activity. See BMP S.8 in Chapter 5 for more details on integrated pest management and in Appendix IV-B for an example.

A 4.4 Storage of Solid Wastes and Food Wastes

Description of Pollutant Sources: This activity applies to businesses and public agencies that store solid wastes and food wastes outdoors. This includes ordinary garbage. If improperly stored in our climate, these wastes can contribute a variety of different pollutants to stormwater. Requirements for handling and storing solid waste may include a permit from the Tacoma-Pierce County Health Department. For more information, call the Waste Management Section at (253) 798-6047.

NOTE: Dangerous solid wastes must be stored and handled under special guidelines. Businesses and agencies that store dangerous wastes must follow specific regulations outlined by Ecology and, in some cases, the Tacoma-Pierce County Health Department. Ecology regulations are outlined in Chapter 6. Please contact Ecology at (360) 407-6300 and the Tacoma-Pierce County Health Department at (253) 798-6047 for the specific requirements and permitting information.

Pollutants of concern include toxic organic compounds, oils and greases, heavy metals, nutrients, suspended solids, chemical oxygen demand (COD), and biochemical oxygen demand (BOD).

Pollutant Control Approach: Store wastes in suitable containers with leakproof lids. Sweep or shovel loose solids. Educate employees about the need to check for and replace leaking containers.

Required BMPs

The following BMPs are required of all businesses and public agencies engaged in storage of non-dangerous solid wastes or food wastes:

- All solid and food wastes must be stored in suitable containers. Piling of wastes without any cover is not acceptable.
- Storage containers must be checked for leaks and replaced if they are leaking, corroded, or otherwise deteriorating.
- Storage containers must have leak-proof lids or be covered by some other means (Figure 4.14). Lids must be kept closed at all times. This is especially important for dumpsters, as birds can pick out garbage and drop it, promoting rodent, health, and stormwater problems.

OR

• If lids cannot be provided for the waste containers, or they cannot otherwise be covered, there is another option: a designated waste storage area must be provided with a containment berm, dike, or curb, and the designated area must drain to a sanitary sewer (contact Industrial Pretreatment Program at (253) 798-3013 prior to any connections) or

holding tank for further treatment. See BMP S.7 and S.3 in Chapter 5 for more information.



Figure 4.14. Solid Waste Dumpsters with Properly Sealed Lids.

- Employees must be trained to frequently check storage containers for leaks and to ensure that the lids are on tightly.
- The waste storage area must be swept or otherwise cleaned frequently to collect all loose solids for proper disposal in a storage container. Do not hose the area to collect or clean solids.
- If you clean your containers, all rinse water from cleaning must be disposed of in a sanitary sewer or septic system.
- Clean out catch basins on your property that receive drainage from your waste storage area. See BMP S.9 in Chapter 5 for details on catch basin cleaning.

Suggested BMPs

- If the amount of waste accumulated appears to frequently exceed the capacity of the storage container, then another storage container should be obtained and utilized.
- Store containers such that wind will not be able to knock them over.
- Designate a storage area, pave the area, and slope the drainage to a holding tank to prevent stormwater run-on or run-off. If a holding tank is used, the contents must be pumped out before the tank is full and properly disposed of. See BMP S.2 in Chapter 5 for more information on disposal options.

- Compost appropriate wastes. Contact Pierce County Solid Wastes at (253) 593-2179 for more information on composting.
- Recycle your solid wastes. The Industrial Materials Exchange program facilitates the transfer of excess materials and wastes to those who can use them. Industrial Materials Exchange can be reached at (206) 296-4899, toll free 1-888-TRY-IMEX or on the Web at:

<www.govlink.org/hazwaste/business/imex/index.html>.

A4.8 Storage of Liquids in Permanent Aboveground Tanks

Description of Pollutant Sources: Aboveground tanks containing liquids (excluding uncontaminated water) may be equipped with a valved drain, vent, pump, and bottom hose connection. They may be heated with steam heat exchangers equipped with steam traps. Leaks and spills can occur at connections and during liquid transfer. Oil and grease, organics, acids, alkalis, and heavy metals in tank water and condensate drainage can also cause stormwater contamination at storage tanks.

Pollutant Control Approach: Install secondary containment or a double-walled tank. Slope the containment area to a drain with a sump. Stormwater collected in the containment area may need to be discharged to treatment such as an **API** or **coalescent plate** oil/water separator, or equivalent BMP. Add safeguards against accidental releases including protective guards around tanks to protect against vehicle or forklift damage, and tag valves to reduce human error. *Tank water and condensate discharges are process wastewater that may need an NPDES permit.*

Required BMPs

- Inspect the tank containment areas regularly to identify problem components such as fittings, pipe connections, and valves for leaks/spills, cracks, corrosion, etc.
- Place adequately sized drip pans beneath all mounted taps and drip/spill locations during filling/unloading of tanks. Valved drain tubing may be needed in mounted drip pans.
- Sweep and clean the tank storage area regularly, if paved.
- Replace or repair tanks that are leaking, corroded, or otherwise deteriorating.
- All installations shall comply with the Uniform Fire Code and the National Electric Code.
- Locate permanent tanks in impervious (Portland cement concrete or equivalent) secondary containment surrounded by dikes as illustrated in Figure 4.19, or Underwriters Laboratory approved double-walled. The dike must be of sufficient height to provide a containment volume of either 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank, whichever is greater, or, if a single tank, 110 percent of the volume of that tank.



(Photo courtesy of Seattle Public Utilities)

Figure 4.19. Aboveground Storage Tanks with Secondary Containment.

- Slope the secondary containment to drain to a dead-end sump (optional), or equivalent, for the collection of small spills.
- Include a tank overfill protection system to minimize the risk of spillage during loading.
- If the tank containment area is uncovered, equip the outlet from the spill-containment sump with a shutoff valve, which is normally closed and may be opened, manually or automatically, only to convey contaminated stormwater to approved treatment or disposal or convey uncontaminated stormwater to a storm drain. Evidence of contamination can include the presence of visible sheen, color, or turbidity in the runoff, or existing or historical operational problems at the facility. Simple pH measurements with litmus or pH paper can be used for areas subject to acid or alkaline contamination.
- At petroleum tank farms, convey stormwater contaminated with floating oil or debris in the contained area through an API or coalescent plate type oil/water separator (Volume V, Treatment BMPs) or other approved treatment prior to discharge to storm drain or surface water.

A4.9 Parking and Storage for Vehicles and Equipment

Description of Pollutant Sources: Parked vehicles at public and commercial parking lots, such as retail store, fleet vehicle (including rent-a-car lots and car dealerships), equipment sale and rental parking lots, and parking lot driveways, can be sources of toxic hydrocarbons and other organic compounds, oils and greases, metals, and suspended solids.

Required BMPs

- If washing of a parking lot is conducted, discharge the washwater to a sanitary sewer (if allowed by Pierce County Industrial Pretreatment Program at (253) 798-3013) or other approved wastewater treatment system, or collect it for offsite disposal.
- Do not hose down the area to a storm drain or receiving water. Sweep parking lots, storage areas, and driveways regularly to collect dirt, waste, and debris.
- An oil removal system such as an API or coalescent plate oil and water separator, or equivalent BMP (see Volume V), approved by Pierce County, is applicable for parking lots meeting the threshold vehicle traffic intensity level of a high-use site. For more information on high-use sites, refer to Volume I, Section 4.2.5, and Volume V, Section 3.2.

A5.2 Building Repair, Remodeling, Painting, and Construction

Description of Pollutant Sources: This activity refers to activities associated with construction of buildings and other structures, remodeling of existing buildings and houses, and general exterior building repair work. Concrete pouring is covered under **A3.2 Concrete Pouring and Asphalt Application at Temporary Sites**.

Pollutants of concern include toxic hydrocarbons, toxic organics, suspended solids, heavy metals, pH, oils, and greases.

Pollutant Control Approach: Employees must be educated about the need to control site activities. Control leaks, spills, and loose material. Utilize good housekeeping practices.

Required BMPs

The following BMPs or equivalent measures are required of all businesses engaged in building repair, remodeling, and construction:

- Employees must be educated about the need to control site activities to prevent stormwater pollution, and also trained in spill cleanup procedures.
- Spill cleanup materials, appropriate to the chemicals being used on site, must be available at the work site at all times.
- The work site must be cleaned up at the end of each workday, with materials such as solvents put away indoors or covered and secured so that vandals will not have access to them.
- The area must be swept daily to collect loose litter, paint chips, grit, and dirt.
- Absolutely no substance can be dumped on pavement, on the ground, or in or toward storm drains, regardless of its content, unless it is water only.
- For wood treating activities drop cloths must be placed where space and access permit before the work begins. Additional drip pans must be used in areas where drips are likely to occur that cannot be protected with a drop cloth.
- Ground or drop cloths must be used underneath scraping, sandblasting work. Ground cloths, buckets, or tubs must also be used anywhere that work materials are laid down.
- Incidental cleaning of paint brushes and other tools that are covered with water-based paints must be cleaned in sinks connected to sanitary sewers

or in portable containers that can subsequently be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based finishes or other materials must be cleaned in a manner that enables collection of used solvents for recycling or proper disposal and cannot be discharged to the sanitary sewer. See BMP S.2 in Chapter 5 for disposal options.

• Storm drain covers or similarly effective devices must be used if dust, grit, washwater, or other pollutants may escape the work area. This is particularly necessary on rainy days. The cover or containment device shall be placed over the storm drain at the beginning of the workday, and accumulated dirty runoff and solids must be collected and disposed of before removing the cover at the end of the day.

Suggested BMPs

The following BMPs are not required, but can provide additional pollution protection:

- Recycle materials whenever possible.
- Light spraying of water on the work site can control some of the dust and grit that can blow away. Oils must never be used for dust control. Never spray to the point of runoff from the site.
- Activities such as tool cleaning should occur over a ground cloth or within a containment device such as a tub.

A7.8 De-icing and Anti-icing Operations for Airports and Streets

Description of Pollutant Sources: De-icing and/or anti-icing compounds are used on highways, streets, airport runways, and on aircraft to control ice and snow. Typically ethylene glycol and propylene glycol are de-icing chemicals used on aircraft. De-icing chemicals commonly used on highways and streets include calcium magnesium acetate (CMA), calcium chloride, magnesium chloride, sodium chloride, urea, and potassium acetate. The de-icing and anti-icing compounds become pollutants when they are conveyed to storm drains or to surface water after application. Leaks and spills of these chemicals can also occur during their handling and storage.

BMPs for Airport De/anti-icing Operations

Pollutant Control Approach for Aircraft: Spent glycol discharges in aircraft application areas are process wastewaters that are regulated under Ecology's Industrial Stormwater General Permit. (Contact the Ecology Southwest Regional Office for details.) BMPs for aircraft icing chemicals must be consistent with aviation safety and operational needs of the aircraft operator.

U.S. EPA is currently studying airport de-icing as part of the pretreatment regulations (40 CFR 403). These regulations are not expected to be promulgated for several years.

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Required BMPs for Aircraft:

- Conduct aircraft de-icing or anti-icing applications in impervious containment areas. Collect aircraft de-icing spent chemicals, such as glycol, draining from aircraft in de-icing or anti-icing application areas and convey to a sanitary sewer, treatment, or other approved disposal or recovery method. Contact the Industrial Pretreatment Program at (253) 798-3013 to obtain permit for discharges to sanitary sewer. Divert de-icing runoff from paved gate areas to appropriate collection areas or conveyances for proper treatment or disposal.
- Do not allow spent de-icing chemicals or stormwater contaminated with aircraft de-icing chemicals to be discharged from application areas including gate areas, to surface water or groundwater, directly or indirectly.
- Transfer de-icing and anti-icing chemicals on an impervious containment pad, or equivalent spill/leak containment area, and store in secondary containment areas (see Storage of Liquids in Aboveground Tanks).

Suggested BMPs for Aircraft:

 Establish a centralized aircraft de/anti-icing facility, if feasible practicable, or in designated areas the tarmac equipped with separate

Note the applicable containment BMP of aircraft de/anti-icing applications, and applicable treatment BMPs for anti-icing spent chemicals such as glycols.

and of collection drains for the spent de-icing liquids.

• Consider installing an aircraft de/anti-icing chemical recovery system, or contract with a chemical recycler, if practicable.

Required BMPs for Airport Runways/Taxiways:

- Avoid excessive application of all de/anti-icing chemicals, which could contaminate stormwater.
- Store and transfer de/anti-icing materials on an impervious containment pad or an equivalent containment area and/or under cover in accordance with BMP Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products in this volume. Other material storage and transfer approaches may be considered if it can be demonstrated that stormwater will not be contaminated with the anti-icing material or the material cannot reach surface or groundwater.

Suggested BMPs for Airport Runways/Taxiways:

- Include limits on toxic materials and phosphorous in the specifications for de/anti-icing chemicals, where applicable.
- Consider using anti-icing materials rather than de-icing if it will result in less adverse environmental impact.
- Select cost-effective de/anti-icing chemicals that cause the least adverse environmental impact.

BMPs for Streets/Highways

Required BMPs for Streets/Highways:

- Select de and anti-icing chemicals that cause the least adverse environmental impact. Apply only as needed using minimum quantities.
- Where feasible and practicable, use roadway de-icing, such as calcium magnesium acetate, potassium acetate, or similar materials that cause less adverse environmental impact than urea and sodium chloride.
- Store and transfer de/anti-icing materials on an impervious containment pad in accordance with BMP Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products in this volume.
- Sweep/cleanup accumulated de/anti-icing materials and grit from roads as soon as possible after the road surface clears.

Suggested BMPs for Streets/Highways:

- Intensify roadway cleaning in early spring to help remove particulates from road surfaces.
- Include limits on toxic metals in the specifications for anti-icing chemicals.

A7.14 Maintenance of Stormwater Drainage and Treatment Facilities

Description of Pollutant Sources: Facilities include roadside catch basins on arterials and within residential areas, conveyance systems, detention facilities such as ponds and vaults, oil and water separators, biofilters, settling basins, infiltration systems, and all other types of stormwater treatment systems presented in Volume V. Roadside catch basins can remove from 5 to 15 percent of the pollutants present in stormwater. When catch basins are about 60 percent full of sediment, they cease removing sediments. Oil and grease, hydrocarbons, debris, heavy metals, sediments, and contaminated water are found in catch basins, oil and water separators, settling basins, etc.

Pollutant Control Approach: Provide maintenance and cleaning of debris, sediments, and oil from stormwater collection, conveyance, and treatment systems to obtain proper operation.

Required BMPs

Maintain stormwater treatment facilities according to the O&M procedures presented in Volume I, Appendix I-B, in addition to the following BMPs:

- Inspect and clean treatment BMPs, conveyance systems, and catch basins (Figure 4.23) as needed, and determine whether improvements in O&M are needed.
- Promptly repair any deterioration threatening the structural integrity of the facilities. These include replacement of clean-out gates, catch basin lids, and rock in emergency spillways.
- Ensure that storm sewer capacities are not exceeded and that heavy sediment discharges to the sanitary sewer system are prevented.
- Regularly remove debris and sludge from BMPs used for peak-rate control, treatment, etc. and truck to a local or state government approved disposal site.
- Clean catch basins in accordance with the information provided in Volume I, Appendix I-B. Additional information is also included in Chapter 5 of this volume, BMP S.9 Cleaning Catch Basins.
- Clean woody debris in a catch basin as frequently as needed to ensure proper operation of the catch basin.
- Post warning signs; "Dump No Waste Drains to Groundwater," "Streams," "Lakes," or emboss on or adjacent to all storm drain inlets *where practical* (Figure 4.24).



Figure 4.23. Catch Basin Cleaning with a Vacuum Truck.



(Photo courtesy of Seattle Public Utilities)

Figure 4.24. "Dump No Waste" Storm Drain Stencil.

- Disposal of sediments and liquids from the catch basins must comply with "Recommendations for Management of Street Wastes" described in Appendix IV-C of this volume.
- Select additional applicable BMPs from this chapter depending on the pollutant sources and activities conducted at the facility. Those BMPs include:
 - A4.7 Storage of Liquid, Food Waste, or Dangerous Waste Containers
 - o A6.3 Soil ESC at Industrial Sites
 - o A7.10 Urban Streets
 - o A7.15 Spills of Oil and Hazardous Substances.

Minimum BMP Identification	Worksheet #10 Provided By: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Water Quality Specialist II Date: 10-21-2011 (Revised)

Describe the BMP's that are needed for the facilit description shall include the following minimum	Describe the BMP's that are needed for the facility to address existing and potential pollutant sources identified in Worksheets #3, 5, and 8. The description shall include the following minimum requirements.
BMP's	Brief Description of Activities or Improvements
Good Housekeeping	Pierce County Stormwater Management and Site Development Manual: A1.3; A2.1; A 3.6; A4.4; A4.8; A4.9; A7.14
Preventive Maintenance	Pierce County Stormwater Management and Site Development Manual: A2.1; A3.11; A4.4; A4.8; A4.9; A 5.2; A7.8; A7.14
Spill Prevention and Emergency Cleanup	Pierce County Stormwater Management and Site Development Manual : A4.8
	If a spill occurs that is larger than can be contained by the spill kits, Pierce County staff are instructed to contact the Washington Department of Ecology (DOE) at 1.800.258.5990. If any toxic substances or other unknown materials are found, call 1.360.407.6300.

Minimum BMP Identification	Worksheet #10 Provided By: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

BMP's	Brief Description of Activities or Improvements
Good Housekeeping	Pierce County Stormwater Management and Site Development Manual: A1.3; A2.1; A3.2; A 3.6; A 3.7; A4.4; A4.8; A4.9; A7.14
Preventive Maintenance	Pierce County Stormwater Management and Site Development Manual: A2.1; A3.11; A4.4; A4.8; A4.9; A 5.2; A7.8; A7.14
Spill Prevention and Emergency Cleanup	Pierce County Stormwater Management and Site Development Manual: A4.8 If a spill occurs that is larger than can be contained by the spill kits, Pierce County staff are instructed to contact the Washington Department of Ecology (DOE) at 1.800.258.5990. If any toxic substances or other unknown materials
	are round, can 1.500.407.0500.

Worksheet #11 Provided By: Rob Dudra Title: Water Quality Specialist II Date: 10-21-2011 (Revised) Annex / LESA / 911 Comm Center BMP Implementation Plan

,			,
Develop a plan for impler Those steps (list dates)	Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (I.E. any construction or design), the schedule for completing Those steps (list dates) and the person(s) responsible for implementation	any construction or design), the sched	dule for completing
BMP's		Scheduled milestone and	Person(s) responsible
		completion date(s)	for action
Good Housekeeping	1. Recycle Materials	Currently Practiced	All Staff
	2. Proper Storage of Potentially Hazardous Materials	Currently Practiced	All Staff
	3. Regular and Proper Clean Up In Fueling and Material Transfer Areas	Currently Practiced	All Staff
Preventive Maintenance	1. Mitigate Spills	Currently Practiced	PPT (Worksheet #2)
	2. Maintenance of Storage Tanks	Annually	Supervisor
	3. Regular Maintenance of Vehicles and Equipment	Currently In Place	All Staff
Spill Prevention and			
Emergency Cleanup			
Inspections	1. Routine Water Quality Inspections & Periodic (Wet/Dry Season)	Refer to Stormwater Operation	PC SurfaceWater
	Inspections (Refer to Tab #9)	& Maintenance Program	Management
		(SWOMP) Document	
	2. Regular Facility Inspections	Currently Practiced	All Staff
	3. Regular Vehicle and Equipment Inspections	Currently Practiced	All Staff

Treatment BMP's	1. Exterior-Stored Products On Paved Surface	Currently Practiced	All Staff
	2. Double Contain/ Cover Exterior-Stored Products	Currently Practiced	All Staff
	3. For Large Spills, DOE will be Contacted	Currently Practiced	All Staff
	4. Review SWOMP Document	By 12/31/2010	All Staff

Eddie Parker

10/31/2011

1. Check Material being Pressure Washedm & Method of Power Washing

Source Control BMP's

BMP Implementation Plan	Worksheet #11 Provided By: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

Develop a plan for impler Those steps (list dates)	Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (I.E. any construction or design), the schedule for completing Those steps (list dates) and the person(s) responsible for implementation	any construction or design), the sche	dule for completing
BMP's		Scheduled milestone and completion date(s)	Person(s) responsible for action
Good Housekeeping	1. Recycle Materials	Currently Practiced	All Staff
	2. Proper Storage of Potentially Hazardous Materials	Currently Practiced	All Staff
	3. Regular and Proper Clean Up In Fueling and Material Transfer Areas	Currently Practiced	All Staff
Preventive Maintenance	1. Mitigate Spills	Currently Practiced	PPT (Worksheet #2)
	2. Maintenance of Storage Tanks	Annually	Supervisor
	3. Regular Maintenance of Vehicles and Equipment	Currently In Place	All Staff
Spill Prevention and			
Emergency Cleanup			
Inspections	1. Routine Water Quality Inspections & Periodic (Wet/Dry Season)	Refer to Stormwater Operation	PC SurfaceWater
	Inspections (Refer to Tab #9)	& Maintenance Program (SWOMP) Document	Management
	2. Regular Facility Inspections	Currently Practiced	All Staff
	3. Regular Vehicle and Equipment Inspections	Currently Practiced	All Staff
Source Control BMP's			

Treatment BMP's	1. Exterior-Stored Products On Paved Surface	Currently Practiced	All Staff
	2. Double Contain/ Cover Exterior-Stored Products	Currently Practiced	All Staff
	3. For Large Spills, DOE will be Contacted	Currently Practiced	All Staff
	4. Review SWOMP Document	By 12/31/2010	All Staff

Summarize the results of monitoring activity. Place the each monitoring report or copy thereof behind this Worksheet.

Actions					
Results					
Performed By					
Type of Inspection					
Date					

* Must be completed by person identified in the SWPPP. Worksheet #12 A Completed By*: Title: Date: Annex / LESA / 911 Comm Center Record of Visual Inspections of Stormwater Discharges

Recommended Action Steps			
List Observed Pollutants and Description of Intensities of Each. Include Floatables, Oil Sheen, Discoloration, Turbidity, Odor, etc. in the Stormwater.			
Ground Discharge ID			
Surface Discharge ID			
Date			

Record pollutant sources/ generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive. List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Certification (Other certification documents may be used as required in Section S4 of the Permit)

Certification by Responsible Company Official: I certify under penalty of law, that this document and all attachments were prepared responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluated the information. Based on my inquiry of the person or persons who manage the systems or those persons directly complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Title	Date Signed
	ure
Name	Signature

tormwater Operation & Maintenance Program (SWOMP)	Provided By: Rob Dudra Title: Assistant Municipal Stormwater Permit Coordinator
Annex / LESA / 911 Comm Center	Date: 10-28-2010

(Place SWOMP Document Behind This Sheet)

Annex/ LESA/ 911 Comm Center

Drainage System Overview

Stormwater runoff from the parking lot of the Annex/ LESA/ 911 Comm Center is collected in a private system of storm lines and catch basins all of which are conveyed south, where it merges with the City of Tacoma's right-of-way stormwater system to a discharge point into the Thea Foss Waterway a part of Puget Sound. A flow restrictor device is noted in one of the catch basins in the private system.

There are four retrofit raingardens as components of the private stormwater system.

Regular maintenance shall be conducted when an exceedence of the maintenance standard is identified in the annual inspection. Specifications of the maintenance plan will be added immediately following the first annual inspection.

Catch Basins

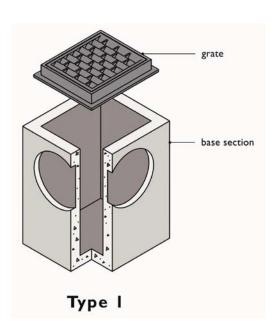
atch basins are underground concrete structures typically provided with a slotted grate to collect stormwater runoff and route it through underground pipes. Catch basins can also be used as a junction in a pipe system and may have a solid lid. There are two catch basin types.

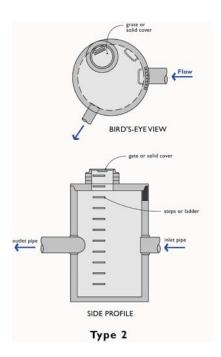
A Type 1 catch basin is a rectangular box with approximate dimensions of 3'x2'x5'. Type 1 catch basins are utilized when the connected conveyance pipes are less than 18 inches in diameter and the depth from the gate to the bottom of the pipe is less than 5 feet.

Type 2 catch basins, also commonly referred to as storm manholes, are round concrete structures ranging in diameter of 4 feet to 8 feet. Type 2 catch basins are used when the connecting conveyance pipe is 18 inches or greater or the depth from grate to pipe bottom exceeds 5 feet. Type 2 catch basins typically have manhole steps mounted on the side of the structure to allow for access.

Both catch basin types typically provide a storage volume (sump) below the outlet pipe to allow sediments and debris to settle out of the stormwater runoff. Some catch basins are also provided with a spill control device (inverted elbow on outlet pipe) intended to contain large quantities of grease or oils.

The most common cleaning method for catch basins is to utilize a truck with a tank and vacuum hose (vactor truck) to remove sediment and debris from the sump. Catch basins may be an enclosed space where harmful chemicals and vapors can accumulate. Therefore, if the inspection and maintenance requires entering a catch basin, it should be conducted by an individual with training and certification in working in hazardous confined spaces.





Control Structure/Flow Restrictor Checklist (Continued) Catch Basins Checklist

			Da	ate				
Frequency	Drainage System Feature	✓	✓	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
A	General					"Dump no pollutants " Stencil or stamp not visible	Stencil or stamp should be visible and easily read	Warning signs (e.g., "Dump No Waste- Drains to Stream") shall be painted or embossed on or adjacent to all storm drain inlets.
M,S	General					Trash & Debris	Trash or debris which is located immediately in front of the catch basin opening or is blocking inletting capacity of the basin by more than 10%.	No trash or debris located immediately in front of catch basin or on grate opening.
М	General					Trash & Debris	Trash or debris (in the basin) that exceeds 60 percent of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of six inches clearance from the debris surface to the invert of the lowest pipe.	No trash or debris in the catch basin.
М	General					Trash & Debris	Trash or debris in any inlet or outlet pipe blocking more than 1/3 of its height.	Inlet and outlet pipes free of trash or debris.
М	General					Trash & Debris	Dead animals or vegetation that could generate odors that could cause complaints or dangerous gases (e.g., methane).	No dead animals or vegetation present within the catch basin.
М	General					Sediment	Sediment (in the basin) that exceeds 60 percent of the sump depth as measured from the bottom of basin to invert of the lowest pipe into or out of the basin, but in no case less than a minimum of 6 inches clearance from the sediment surface to the invert of the lowest pipe.	No sediment in the catch basin
А	General					Structure Damage to Frame and/or Top Slab	Top slab has holes larger than 2 square inches or cracks wider than 1/4 inch (Intent is to make sure no material is running into basin).	Top slab is free of holes and cracks.

Control Structure/Flow Restrictor Checklist (Continued)

			Da	ate				
Frequency	Drainage System Feature	✓	✓	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
A	General					Structure Damage to Frame and/or Top Slab	Frame not sitting flush on top slab, i.e., separation of more than 3/4 inch of the frame from the top slab. Frame not securely attached.	Frame is sitting flush on the riser rings or top slab and firmly attached.
А	General					Fractures or Cracks in Basin Walls/ Bottom	Maintenance person judges that structure is unsound.	Basin replaced or repaired to design standards.
А	General					Fractures or Cracks in Basin Walls/ Bottom	Grout fillet has separated or cracked wider than 1/2 inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.	Pipe is re-grouted and secure at basin wall.
А	General					Settlement / Misalignment	If failure of basin has created a safety, function, or design problem.	Basin replaced or repaired to design standards.
М	General					Vegetation	Vegetation growing across and blocking more than 10% of the basin opening.	No vegetation blocking opening to basin.
М	General					Vegetation	Vegetation growing in inlet/outlet pipe joints that is more than six inches tall and less than six inches apart.	No vegetation or root growth present.
М	General					Contamination and Pollution	Any evidence of oil, gasoline, contaminants, or other pollutants (Coordinate removal/cleanup with local water quality response agency).	No contaminants or pollutants present.
A	Catch Basin Cover					Cover Not in Place	Cover is missing or only partially in place.	Any open catch basin requires maintenance. Catch basin cover is closed
A	Catch Basin Cover					Locking Mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts into frame have less than 1/2 inch of thread.	Mechanism opens with proper tools.
A	Catch Basin Cover					Cover Difficult to Remove	One maintenance person cannot remove lid after applying normal lifting pressure. (Intent is to keep cover from sealing off access to maintenance.)	Cover can be removed by one maintenance person.

Control Structure/Flow Restrictor Checklist (Continued)

			Da	ate				
Frequency	Drainage System Feature	✓	✓	✓	✓	Problem	Conditions to Check For	Conditions That Should Exist
A	Ladder					Ladder Rungs Unsafe	Ladder is unsafe due to missing rungs, not securely attached to basin wall, misalignment, rust, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.
	Grates					Grate opening Unsafe	Grate with opening wider than 7/8 inch.	Grate opening meets design standards.
M,S	Grates					Trash and Debris	Trash and debris that is blocking more than 20% of grate surface inletting capacity.	Grate free of trash and debris.
А	Grates					Damaged or Missing.	Grate missing or broken member(s) of the grate.	Grate is in place and meets design standards.

If you are unsure whether a problem exists, please contact a Professional Engineer.

Comments:

Key:

- (M) Monthly from November through April.(A) Once in late summer (preferable September)(S) After any major storm (use 1-inch in 24 hours as a guideline).

Stormwater Operation & Maintenance Program (SWOMP) Log	Worksheet #13 Provided By: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

This log chronicles the ongoing performance of Operation & Maintenance activities detailed in the SWOMP.

Forward Actions				
Results				
Performed By				
Activity Description				
Date				

Employee Training Log	Worksheet #14 Initiated By: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

Describe the annual trair * Place Employee Trair	Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices. * Place Employee Training Attendee Sign-in Sheet (Worksheet 13A) behind Employee Training Log	and material management	practices.
Training Topics	Brief Description of Training Program / Materials	Scheduled for Training	Attendees
	(e.g., video, presenter, newsletter course)	(list dates)	(by position)*
Spill Prevention and	Review / Training on BMP A 4.8	04-22-2011	Staff
Response			
Good Housekeeping			
Material Management			
Practices			
Other Topics			
Communication Channels			

	POLLUTION PREVENTION TEAM (P2 Team) SWPPP Implementation Monitoring	
--	---	--

Employee Training Log	Worksheet #14 Initiated By: Rob Dudra
Annex / LESA / 911 Comm Center	Title: Assistant Municipal Stormwater Permit Coordinator Date: 10-28-2010

Describe the annual trai	Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices.	and material management p	oractices.
* Place Employee Trair	* Place Employee Training Attendee Sign-in Sheet (Worksheet 13A) behind Employee Training Log		
Training Topics	Brief Description of Training Program / Materials	Scheduled for Training	Attendees
	(e.g., video, presenter, newsletter course)	(list dates)	(by position)*
Spill Prevention and			
Response			
Good Housekeeping			
Material Management			
Practices			
Other Topics			
Communication Channels			

POLLUTION PREVENTION TEAM (P2 Team)	ION TEAM (P2 Team)		
SWPPP			
Implementation			
Monitoring			
Procedures			

Smployee Training Attendee Sign-In Sheet Annex / LESA / 911 Comm Center	Worksheet #14A Provided By: Title:	
raining Location: Date: 32 / 1/6/1 / 201/	Date:	

Provide and complete this document for each training event.

Today's Date:	Print Name	Signature	Facility Work Position
11-22-11	Roy Nansel	Res France	annor 100 no
11-22-11	Scot fores		Anex Camer
t/22/201(John Keyt	14/1/19	Remann 11/2/

Worksheet #14A Provided By: Title:		
et	te: /	
gn-In Sheet e nter	Date:	
mployee Training Attendee Sign-In annex / LESA / 911 Comm Center	raining Location:	resenter:

Provide and complete this document for each training event.

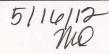
Facility Work Position							
Signature							
Print Name							
Today's Date:							

Inspection Log	Worksheet #15
	Initiated By: Rob Dudra
	Title: Assistant Municipal Stormwater Permit Coordinator
Annex / LESA / 911 Comm Center	Date: 10-28-2010

This sheet represents chronological documentation of all inspections for the facility

Actions	Creation of Stormwater Pollution Prevention Plan (SWPPP); Development of A Stormwater Operation & Maintenance Program (SWOMP)	SWPPP P2 Team meeting needed; Review BMPs with staff	Wet Season SWPPP Inspection Q1 2012		
Results	Determined SWPPP Would be Required; Concurrent Inspection of Stormwater System	SWPPP entries reviewed; implementation meeting needed	SWPPP entries reviewed/ updated		
Performed By	Corrie Smith / Clarence Johnson Pierce Co. SWM	Rob Dudra/ Pierce Co. SWM	Rob Dudra/ Pierce Co. SWM		
Standard Compliance Rating	Initial Assessment	3	4		
Type of Inspection	Initial Assessment	Wet Season SWPPP Review	Dry Season SWPPP Inspection		
Date	10-04-2010	04/20/2011	09/19/2011		







Work Order PC-14087

Pierce County Printed 5/16/2012 - 12:06:24 PM (Duplicate Copy) Asset Name: Annex East & LESA Com Center

Asset ID: 369

Site Address: 2401 S 35th St, Tacoma, WA

CSM / CRP:

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	w	ıw	u		n.						LCI.	20	-	

Contact:	
Phone:	

Phone:

Target Date & 1/26/2012 (2) hrs

Est. Project Length: Assigned To:

Smith, Corrie (253) 798-3073

Site Comments: Z7 Annual Inspection_C (Site has 4 Raingardens that were a retrofit project SWM designed in 2006. Try Fred Hogan, Tim Chan, Steve Reynolds or Timothy Lowry (whose now with City of Seattle Stormwater Div.) for LID project and whole system storm as-builts. PALS, Wes, Scott, Roy, and City of Tacoma Planning Dept. have no storm plans or as-builts. Annex discharges to the Foss waterway via one of the twin ninety-sixes.)

Basin	_	001	_
Control Structure?	-	NO	
Gate Code	-	-	
Parcel Number	_	7005000521	
Pond Type 1		_	
Pond Type 2			_
Pond Type 3		_	_
Sewered?			_
Source Control PPGS		YES	
Surface Water Credit Program?			_
WQ Feature Type 1		SED	_
WQ Feature Type 2	_		_
WQ Feature Type 3		_	_

Work Order History (Most Recent 2)-

WO#	Reason	Status	Target Date	Labor Report
PC-12362	Liquid chemicals are stored without secondary containment at 2 locations (see attached photos A, B, C and attached map entitled "Work Order #PC-12362").	Closed	5/20/2011	Construct a concrete berm around the hydraulic fluid tank located behind the trash compactor or replace the hydraulic fluid tank with one that's double -walled.
PC-12363	The fuel tank of the generator located on the north side of the building appears to be missing secondary containment (see photos A & B; see map Work Order #PC-9901 for location).	Closed	5/20/2011	Construct a concrete berm along the perimeter of the concrete pad that's beneath the generator or replace the generator's fuel tank with one that's double -walled. SEE WORK ORDER #12362.

Labor			West of the second	
Labor	Work Date	Reg Hrs	OT Hrs	Other Hrs
Smith, Corrie	2/10/2012	4	0	0

Findings

Project Start Date: 2/10/2012 2:53:00 PM Project Completion Date: 1/27/2012 2:53:00 PM Supervisor Initials: CS

Crew Comments/Results:

CRS. 1/26/2012. BMP rating = 3; general adherence to implementation of BMPs, but lacking full implementation. Performed inspection with Larry Dunn, City of Tacoma Source Control Inspector, and Wes Redlin, Facilities Supervisor.

Raingardens are in good condition; no evidence of flooding or ponding water, and plants are

healthy.

Larry Dunn told Wes that the City of Tacoma requires that trash compactors have an underdrain that connects to the sanitary sewer. Wes agreed to call Larry when the trash compactor is moved, so that Larry can check for an underdrain beneath it. I have not seen any evidence that this trash compactor is leaching liquids.

See Facilities Management Assessment Report (punchlist work orders) for site conditions and required actions. (map attached)

Inspector

Received By



CompletePrinted: 5/16/2012 12:32:23 PM Facilities Assessment - Facilities Management - Reported

F2 Key / Dbl-Click = Lookup	Esc Key = Close Message
Ctrl-Enter = Save	F5 Key = Refresh

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Location / Asset is Annex East & LESA Com Center

Type is equal to Punch List

Format Criteria

Format 1 Target Date is within All To Date

Format 2 Target Date is within Next 6 Months

Format 3 Date Reported Complete has a value

✓ Save All

Reported Complete?

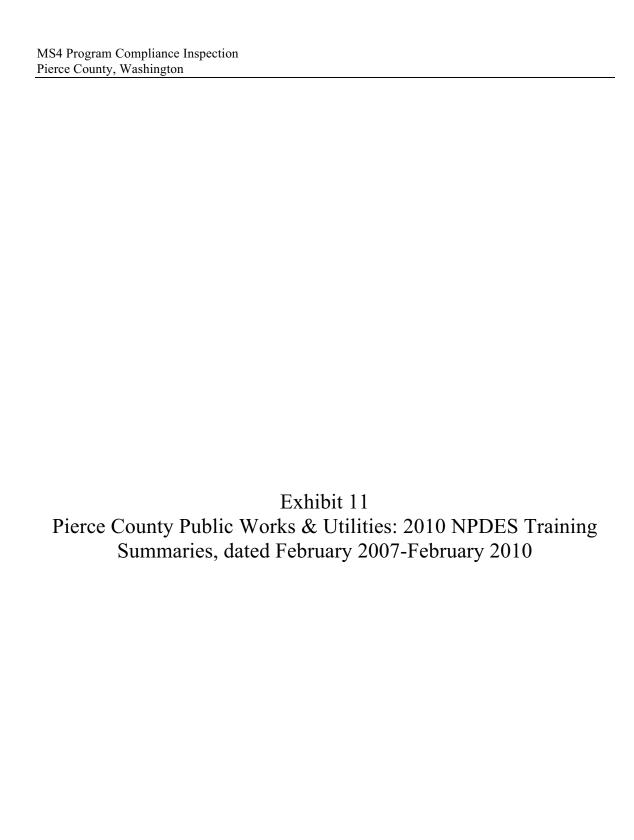
Date Reported Complete

Target Date

Facilities Management > Annex East & LESA Com Center

/ Save	/ Save
9/26/2012	5/4/2012
6 Month Punchlist	12 Month Punchlist
Remove sediment from catch basin.	Repair or replace 12 Month spill control elbows.
One catch basin has excessive sediment Remove sediment 6 Month (see Work Order #14087 map from catch basin. Punchlist attached).	Spill control elbows in two catch basins Repair or replacare in need of repair (see photos wo14087A and WO14087B and Work elbows.
m	က
PC- 14337	PC- 14338





PIERCE COUNTY PUBLIC WORKS & UTILITIES: NPDES: TRAINING SUMMARIES 02/07-02/10

SURFACE WATER MANAGEMENT		
NAME OF TRAINING	<u>DATE(S)</u>	STAFF MEMBER NAME
WSU PESTICIDE LICENSE 2010		ROD GRATZER
WSU IPM & Pesticde Safety Education	1/13-14/2010	
WSU PESTICIDE LICENSE 2009		
WSU IPM & Pesticde Safety Education	1/14-15/2010	
Water & Land Use in the PNW	11/04-06/2009	
Illicit Discharge	10/28/2008	
	10/14/2008	
	09/30/2008	
WSU PESTICIDE LICENSE 2008		
WSU Pesticde Safety Education	12/6/2007	
	12/1/2007	
Bacteria/Microbe EPA	5/14-15/2007	
EPA ENVIRON Chem Fundamentals	02/23-24/2010	DENNIS LIGHTBURN
Basic Inspector Training	02/09-11/2010	
WSDOT Drainage Inspection	11/11/2009	
WSDOT Excavation/Embankment	02/12/2009	
EPA ENVIRON Chem Applied	02/25-26/2010	ROB DUDRA
EPA ENVIRON Chem Fundamentals	02/23-24/2010	
Basic Inspector Training	02/09-11/2010	
Porous Pavement	10/22/2008	AL AMIRZEHNI
Env Site Assessment Trng	09/16/2008	
Porous Pavement	05/12/2008	
Delineation of High Water Mark	11/19-20/2009	ANN BOEHOLT
Using Revised WA St Wetland	10/14-15/2009	
Field Indicators 4 Hydric Soil	05/08/2009	
Hydric Soils Workshop	05/08/2009	
Desian Tips for Detention Pond	07/30/2008	
Society of Wetland Scientists	05/26-30/2008	
Stormwater Tx 4 Practicing Eng	02/12-13/2008	
Field Staff Conference	10/24/2007	

BARBARA ANN SMOLKO				BRIAN BENNETT					CHRIS GRECO							CLARENCE JOHNSON							CORRIE SMITH							CURT CARLISLE	
11/19-20/2009	05/11-14/2009	05/06/2009	06/25-26/2008	11/19-20/2009	02/26/2009	11/18-19/2008	05/12/2008	05/07-08/2008	11/06/2009	11/05/2009	11/04/2009	10/28/2008	10/14/2008	09/30/2008	03/29/2007	09/29/2009	10/28/2008	10/14/2008	09/30/5008	05/14/2007	05/08/2007	03/20/2007	02/09-11/2010	08/26-27/2009	02/25-26/2009	10/28/2008	10/14/2008	09/30/2008	09/18/2008	01/11/2010	10/20/2008
Delineation of High Water Mark	Non-Point Source/Stormwater	So Sound Science Symposium	LID Workshop - Site Planning	Delineation of High Water Mark	Pervious Concrete - Pavement	UW - Hydrology & Basic Hydraul	Porous Concrete	UW - Rdwy Culvrt Hydrolic Dsan	Water & Land Use in the PNW			Illicit Discharge			Contech Stormwater Solutions	CESCL Training	Illicit Discharge			ENV Crimes Awareness		Solutions for Stormwater Management	Basic Inspector Training	Intro to Aquatic Toxicology	StormwaterRX: Design to Meet	Illicit Discharge			CESCL Training	Erosion Sediment & Control	Erosion Sediment & Control

NAMTTEN AUTO	CORINITAR	DAN WRYE									DAVID DAVIS						DAVID LARSEN		DAVID RENSTROM			DAWN ANDERSON								DEBBY HYDE	
0107/11/10	10/20/2008	11/09-12/2009	05/06/2009	04/07-11/2009	11/17-20/2008	09/21-24/2008	09/16/2008	12/04/2007	06/23-27/2007	06/13/2007	11/19-20/2009	09/29/2009	08/21/2008	06/25-26/2008	05/28-29/2008	05/12/2008	10/09/2008	09/18/2008	02/04-05/2009	09/16/2008	10/24/2007	07/14/2009	02/26/2009	11/16-19/2008	10/22/2008	06/25-26/2008	05/28-29/2008	06/12/2008	05/07-08/2008	07/14/2009	06/09/2009
Erocion Codimont O. Control	Erosion Sediment & Control	2009 AWRA Conference	So Sound Science Symposium	2009 AWRA Spring Conference	2008 AWRA Conference	PNPCA Annual Conference 2008	Environ Site Assess Training	Current Issues in Stormwater	AWRA 2007 Summer Conference	Managing Shoreline Drainage	Delineation of High Water Mark	CESCL Training	NRMC Pervious Concrete	LID Workshop-Site Planning	Construction Inspection	Porous Concrete	ESA Track 3	ESA Track 3F	2009 NW Stream Team Restoration	Env Site Assessment Training	Field Staff Conference	Pervious Pavement Alternatives	APWA - Low Impact Dev for PW	2008 Int'l LID Conference	Porous Pavement	LID Workshop - Site Planning	LID Workshop - Bioretention	Porous Concrete	LID Workshop - Permeable Pavin	Pervious Pymt Alternatives	Tools for Sustanability

DENNIS DIXON								DENNIS LIGHTBURN					DOUG THOMPSON			ERICA GRIMM										GARY KODEN			GREG FLANDERS		GREG FORD	
09/23/2009	09/14-16/2009	06/06-10/2009	02/26/2009	02/02-05/2009	11/18/2008	10/22/2008	05/19-23/2008	02/23-24/2010	02/09-11/2010	11/11/2009	02/12/2009	04/15/2008	04/07-10/2009	05/12/2008	03/08-09/2007	11/02-03/2009	07/21/2009	07/14/2009	10/09/2008	09/18/2008	09/16/2008	07/30/2008	05/12/2008	02/06/2008	11/14-15/2007	01/11/2010	11/19-20/2009	09/16/2008	01/11/2010	10/20/2008	01/11/2010	10/20/2008
Pre-Winter Storm Meeting	NORFMA - 2009 Conference	ASFPM 2009 Conference	An Exam of Levee Veg. Policy	Adv Floodplain Mamt Concepts	NORFMA Flood Meeting 2008	Porous Pavement	ASFPM 2008 Conference	EPA ENVIRON Chem Fundamentals	Basic Inspector Training	WSDOT Drainage Inspection	WSDOT Excavation/Embankment	AGC Stormwater BMPs Construct	APWA 2009 Spring Conference	Porous Concrete	WSDOT Highway Runoff Manual	WDNR Learning Event	W. WA Hydrology	Pervious Pymt Alternatives	ESA Track 3	ESA Track 3F	Env Site Assessment Trng	Desian Tips for Detention Pond	Porous Concrete	BMP Performance	UW - Hydrology & Basic Hydraul	ESA Track 3	Delineation of High Water Mark	Env Site Assessment Trng	ESA Track 3	ESA Track 3F	FSA Track 3	ESA Track 3F

NORFMA - 2009 Conference	09/14-16/2009	HANS HUNGER
ASFPM 2009 Conference	06/06-10/2009	
APWA 2009 Spring Conference	04/07-10/2009	
WA Climate Change Impacts	02/12/2009	
Adv Floodplain Mamt Concepts	02/02-05/2009	
NORFMA Flood Meeting 2008	11/18/2008	
Porous Pavement	10/22/2008	
Env Site Assessment Trng	09/16/2008	
APWA 2008 Congress & Expo	08/17-20/2008	
ASFPM 2008 Conference	05/19-23/2008	
Failed Dams & Levees:	10/31/2007	
ASFPM 2007 Conference	06/03-07/2007	
2009 AWRA Conference	11/09-12/2009	HAROLD SMELT
NORFMA - 2009 Conference	09/14-16/2009	
Pre-Flood Season Training	10/03/2008	
APWA 2008 Congress & Expo	08/17-20/2008	
Levee Safety Summit	02/26-27/2008	
Failed Dams & Levees:	10/31/2007	
ASFPM 2007 Conference	06/03-07/2007	
Delineation of High Water Mark	11/19-20/2009	HELMUT SCHMIDT
2009 NW Stream Restoration	02/04-05/2009	
Porous Pavement	10/22/2008	
Pre-Flood Season Training	10/03/2008	
Env Site Assessment Trna	09/16/2008	
River Restoration NW 2008	02/04-07/2008	
Failed Dams & Levees:	10/31/2007	

Delineation of High Water Mark Env Site Assessment Trng Large Woody Debris Workshop River Restoration NW 2008	11/19-20/2009 09/16/2008 05/30/2008 02/04-07/2008	INGO KUCHTA
Failed Dams & Levees: NW Stream Restoration Design	10/31/2007 02/05-08/2007	
Delineation of High Water Mark WDNR Learning Event	11/19-20/2009 11/02-03/2009	JANINE REDMOND
Field Indicators 4 Hydric Soil Using Revised WA St Wetland	05/08/2009	
Marine Shoreline Dev Seminar	02/04/2009	
Env Site Assessment Trna	09/16/2008	
Stormwater Tx 4 Practicing Eng	02/13/2008	
SEPA/NEPA	01/16/2008	
Field Staff Conference	10/24/2007	
Shoreline Permitting - 2007	10/02/2007	
SEPA Env. Analysis Integration	08/23/2007	
Managing Shoreline Drainage	06/13/2007	
How to Determine Ordinary High	03/22-23/2007	
Tree & Shrub ID for WWA	02/21/2007	
Delineation of High Water Mark	11/19-20/2009	JEFFREY DAVIDSON
Env Site Assessment Trna	09/16/2008	
Certified Erosion/Sediment Con	05/09-10/2007	

JOELLEN (JO) CRAIG	JOHN COLLINS											JON THOMPSON								JUSTIN OFFICER	KARA MOORE	KAREN FITCHITT			KYLE DWORSHAK		LARRY TROYER	
	07/14/2009	05/19/2009	02/03/2003	02/06/2009	03/20+22/2009	02/12/2009	09/18/2008	01/16/2008	12/04/2007	10/25/2007	07/11/2007	10/28/2008	10/14/2008	09/30/2008	02/06/2008	05/15/2007	05/14/2007	05/14/2007	05/08/2007			09/29/2009	07/14/2009	09/18/2008	01/11/2010	01/13-14/2009	01/11/2010	10/20/2008
	Pervious Pymt Alternatives	PS Stormwater Monitor Workshop	System for Urban Stormwater	So Sound Science Symposium	Cert Prof-Storm Water Quality	WA Climate Change Impacts	ESA Track 3F	Another 100 Yr Storm	Wastewater Operator Cert	Field Staff Conference	US EPA Stormwater Program	Illicit Discharge			BMP Performance	Bacteria/Microbe EPA Conf		Env Crimes Awareness		Delineation of High Water Mark		CESCL Training	Pervious Pvmt Alternatives	ESA Track 3F	ESA Track 3	WSDOT Highway Runoff Manual	ESA Track 3	ESA Track 3F

I FNNART KRIISF		LORIN REINELT					MARK SCHUMACHER						MARSHA HUEBNER						MARTY ERETH				MEI TSSA PAIII SON	MICHAEL DACCA					MICHAEL DODD	
01/11/2010	10/20/2008	09/23/2009	09/14-16/2009	02/09-11/2009	10/22/2008	06/19-21/2007	01/11/2010	11/19-20/2009	02/26/2009	10/20/2008	09/16/2008	04/15-17/2008	11/02-03/2009	02/02-05/2009	01/15/2009	09/04-05/2008	09/02-03/2008	07/30/2008	11/19-20/2009	04/15-16/2009	12/09-10/2008	09/16/2008	02/08-11/2009	01/11/2010	11/19-20/2009	02/26/2009	10/20/2008	10/31/2007	01/11/2010	10/20/2008
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Pre-Winter Storm Meeting	09/23/2009	
An Exam of Levee Veg. Policy	02/26/2009	
Pre-Flood Season Training	10/03/2008	
Env Site Assessment Trng	09/16/2008	
SEPA/NEPA	08/26/2008	
Design Tips for Detention Pond	07/30/2008	
Failed Dams & Levees:	10/31/2007	
Intro to Engineered Log Jam	09/17-21/2007	
Delineation of High Water Mark	11/19-20/2009	RANDY BRAKE
CESCL Training	09/29/2009	
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NORFMA Flood Meeting 2008	11/18/2008	
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arge Woody Debris Workshop	05/30/2008	
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EPA ENVIRON Chem Fundamentals	02/23-24/2010	
Basic Inspector Training	02/09-11/2010	

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FACILITIES MANAGEMENT		
Dan & Rob,		
We were unable to find any record of our personnel attending the training you list below in your original email	nding the training you list belo	ow in your original email.
Bob		
Bob Carr		
Maintenance & Operations Division Manager		
Pierce County Dept. Of Facilities Management		
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Stormwater Seminar	09/26/2007	David Acree
WWHMV Stormwater Modeling Seminar	03/22/2007	Paul Barber
Pervious Pavement Alternatives	07/14/2009	Jeff Sharp
WWHMV Stormwater Modeling Seminar	03/22/2007	
Pervious Pavement Alternatives	07/14/2009	Steve Carstens
WWHMV Stormwater Modeling Seminar	03/22/2007	Jeff Kidston
Stormwater Treatment Seminar	02/12/2008	Debra Mershon
Hydrology and Basic Hydraulics	08/15/2007	
Design of Storm Sewers and Pavement Drainage	11/05/2007	
Managing Shoreline Drainage	05/21/2008	Terry Milstid
Stormwater Treatment Seminar	02/12/2008	Dave Peterson
Hydrology and Basic Hydraulics	08/15/2007	
Design of Storm Sewers and Pavement Drainage	11/05/2007	

Stormwater Seminar	09/18/2007	Bob Witzl
CESCL Certification Course	11/19/2009	Scott Murdock
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CESCL Certification Course	10/10/2008	Bill Peterson
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CESCL Certification Course	01/22/2010	Jan Hedberg
CESCL Certification Course	10/10/2008	Skip Greeson
CESCL Certification Course	04/16/2009	Tom Eddy
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CESCL Certification Course	11/19/2009	Jim Gillette
Pervious Pavement	07/14/2009	
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NAME OF TRAINING	<u>DATE(S)</u>	STAFF MEMBER NAME
From: Steve Wamback		
To: Dan Wrve		
Subject: RE: Update of Training Files		
My staff have not taken any of these classes.		
Steve		

	STAFF MEMBER NAME	Amell, Rod	Bacher, Lonald	Baker, Geri	Bemis, Tyler	Benedict, Justin	Bostic, Rusty	Bryson, Robert	Chappell, Bryan	Emmett, Rob	Falemalu, Fale	Fischer, Randy	Flanders, William	Heil, Steve	Hicks, Donnell	Holt, Jeffery	Hoppe, John	Jackowski, James	Jamison, Robert (RT)	Johnson, John	Johnson, Michael	Ketter, Kyle	Newlin, John	Patterson, Dennis	Petranovich, T. Jr	Pittman, John	Riley, Bob	Rose, Steve	Rubalcaba, Steve	Simons, Jay	Stubbs, Alice	Swanson, Eugene	Trutman, Frank	Wade, Brian	Wells, John	Woods, Christopher
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Alvarez, Tonya	Anderson, Arthur	Bissen, Don	Borgman, Michael	Cabe, Patricia	Curry, Vernon	Czerwonka, Tim	Fleming, Nadine	Jackowski, Peter	Jones, Brandon	Lantz, Wes	Meshke, Donna	Patnode, Paul	Russell, Rick	Rydberg,Shawn	Skoda, Jeff	Todhunter, Timothy	Young, Robert	Zurfluh, Thomas	Boyer, Brad	Jensen, Martin	Johnson, Tamara	Laduke, John	Privett, Mike	Schmitt, Dave	Tolland, James	Zurfluh, Lance
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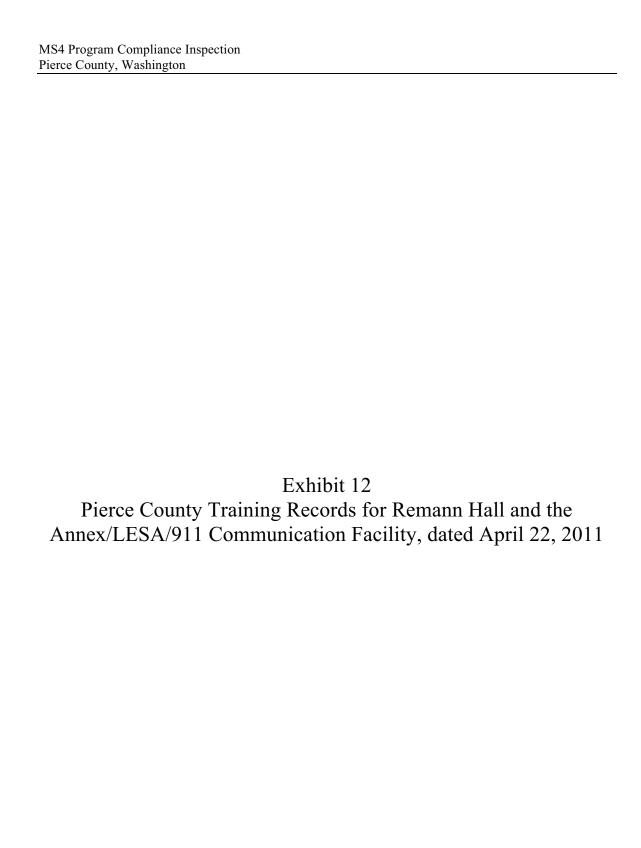
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	(S) STATE	12/10/2009		12/20/2009	2009		2009	2009		2002		2009		<u>DATE(S)</u>	05/12/2008	
PARKS & RECREATION		NPDES Regs		Stormwater Permits	Pesticide Classes - WSU		Nat'l Rec & Park Assn Pac NW Resource Mgmt School	Wilbur Ellis Company (Pesticide credits)		Washington run & Lanuscape (restictue creuns)		WWGCSA Annual Seminars/GCSAA	AIRPORTS & FERRIES		Porous Concrete/ Pavement	

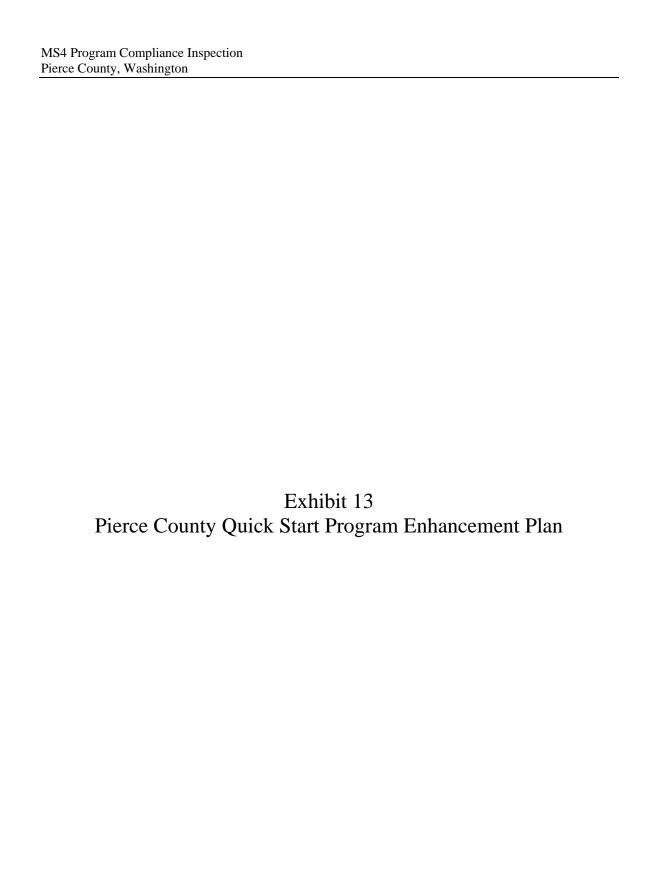


Worksheet #14A Provided By: Title: Date: Date: 32 / 1/9/1 / 201/ Employee Training Attendee Sign-In Sheet Annex / LESA / 911 Comm Center Training Location: Topic(s): $A \notin \mathcal{S}$ Presenter:

Provide and complete this document for each training event.

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Public Works and Utilities

2702 South 42nd Street, Suite 201 Tacoma, Washington 98409-7322 (253) 798-7250 • Fax (253) 798-2740 Brian J. Ziegler, P.E.
Director
Brian.Ziegler@co.pierce.wa.us

June 19, 2012 WP59000

Julie Congdon US EPA Region 10 1200 Sixth Avenue, Suite 900, OCE-133 Seattle, Washington 98101

Vince McGowen
Washington Department of Ecology
PO Box 47775
Olympia WA 98504-7775

RE:

Pierce County, Washington, NPDES Phase I Stormwater Permit, WAR04-4002, Program Evaluation/Inspection Quick Start Program Enhancement Plan

Dear Ms. Congdon and Mr. McGowen:

Enclosed is a copy of Pierce County's *Quick Start Program Enhancement Plan* in response to the April-May 2012 NPDES Program Evaluation/Inspection conducted by US Environmental Protection Agency (EPA) Region 10, Office of Compliance and Enforcement, for your information and use.

Pierce County prepared this Plan as a response to the verbal feedback Region 10 and EPA's Contractor gave us at the conclusion of the May 16th onsite evaluation in Tacoma. As you can see from the enclosed Plan, Pierce County has taken immediate steps to improve our already quality Phase I Stormwater Permit Program, based on your feedback at the meeting. Specifically, the Plan shows that Pierce County has already completed the following:

- A re-inspection, assessment and corrections of source control needs at Remann Hall;
- A re-emphasis on withholding payment to contractors not fully implementing onsite documentation of stormwater construction sites monitoring;
- Site-specific SWPPP training at County facilities;
- Formalizing the County's erosion potential assessment policy; and
- Enhanced NPDES stormwater training and recordkeeping.

Additionally, while not a specific area of feedback from the May program Audit, Pierce County Executive Pat McCarthy took the Audit as an opportunity to strengthen and clarify stormwater responsibilities of all County departments by issuing Executive Order 2012-01, *Concerning Stormwater Management*. The enclosed Plan includes all of these actions taken as well as others designed to enhance the County's Stormwater Program and to help Pierce County be a leader in managing stormwater and protecting water quality throughout EPA's Region 10.



Pierce County appreciates the opportunity Region 10's Audit gave us to look into our program and hear from your experiences on improvements that we could make. We hope the actions we have taken and plan to take fully address your suggestions. Please feel free to call me if you would like to discuss any of the actions included in the *Quick Start Program Enhancement Plan*. I can be reached at (253) 798-4672, or dwrye@co.pierce.wa.us.

Finally, I am also attaching for your information our recently published Pierce County's 2011 Water Quality Report Card. We have published this Report Card annually since 2008 to document and determine trends in watershed health in Pierce County watersheds. We hope you find the information contained in the report helpful.

Sincerely,

Dan D. Wrye

Water Quality Manager

DDW:kj

Enclosures: Pierce County's Quick Start Program Enhancement Plan

Pierce County's 2011 Water Quality Report Card

c: Edward J. Kowalski, Director, Region 10 Office of Compliance and Enforcement

Scott Coulson, PG Environmental, LLC

Brian Ziegler, Director, Public Works and Utilities Department Harold Smelt, Division Manager, Surface Water Management

Pierce County NPDES Stormwater Permit Team

Quick Start Program Enhancement Plan

In response to US EPA's
Program Evaluation/Inspection
May 15-16, 2012

NPDES Phase I Municipal Stormwater Permit Number WAR04-4002



I. Introduction

This is a report on actions Pierce County has taken and will take in response to recommendations of US Environmental Protection Agency's (EPA) May 2012 Audit Team concerning Pierce County, Washington's implementation of its National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Stormwater Permit. EPA is auditing all Phase I jurisdictions nationwide and Pierce County was the first municipal government to be audited in EPA's Region 10. The Audit Team was comprised of two EPA contractors with the firm PG Environmental, LLC, two EPA Region 10 Office of Compliance and Enforcement staff, and three Washington Department of Ecology Municipal Stormwater Permit staff.

The Audit began with an information request by EPA dated April 2, 2012. That information request covered some 46 topical areas, each involving multiple documents. Of those, only eight topics required submittals by Pierce County by May 4, 2012. Pierce County provided responses to all 46 topical areas, plus additional materials, by the May 4th deadline.

The actual inspection of Pierce County occurred on May 15-16, 2012, and consisted of in-office and infield investigations.

At its closing conference on May 16th, the Audit Team provided some preliminary impressions/findings to Pierce County. This report provides actions Pierce County has and is taking to respond to the preliminary findings. We recognize the Audit Team was providing us its preliminary findings and that additional discussions and analyses were likely that could alter or add to those findings. That said, Pierce County determined to advance actions now to improve its stormwater program. Other actions determined by the Audit Team, if any, will be incorporated into this Plan when the final Audit Report is available.

II. Program Enhancements

A. Enhancing Source Control at Remann Hall

During the site visit by the Audit Team to Remann Hall on May 16th, Audit Team members noted several source control issues, and explicitly mentioned concerns about best management practice implementation, site-specificity needs in Stormwater Pollution Prevention Plans, and staff training and recording keeping. Specific enhancements are intended to resolve all of these and are described below.

As a result, on May 17th, Pierce County conducted a detailed site inspection of Remann Hall and updated its 2011 Facilities Assessment of that facility. That Facilities Assessment was uploaded into the County's central Maintenance Connection data base on May 18th and was forwarded to Facilities Management Department, custodial department of Remann Hall. Since May 29th, Facilities Management Department began implementation of all needed actions specified in the May 18th Updated Facilities Assessment. All deficiencies have been corrected or will be by the end of 2012. Attachment One is the May 18, 2012 Update to the Facilities Assessment, and includes status of actions.

Additionally, in June 2012 Pierce County Surface Water Management conducted site-specific Stormwater Pollution Prevention Plan (SWPPP) training for Remann Hall staff. A summary of that training is also in Attachment One. Pierce County Surface Water Management Division (SWM) is also conducting this type of training at all County facilities with SWPPP's. This training will include familiarization with the site specific SWPPP's and include applicable Best Management Practices (BMP's), spill control and recognizing and reporting illicit discharges -- Illicit Discharge Discovery and Elimination (IDDE).

B. Enhancing Construction Oversight of County Projects

During the site visit by the Audit Team to Wollochet Drive construction site, the Audit Team reported it found the site to be in good condition. However, the Audit Team noted that the onsite person interviewed was unable to identify the designated Erosion and Sedimentation Control Lead (ESC) for the Contractor. Additionally, the Team reported that required construction sites general permit inspections not documentation was not available onsite. The Audit Team suggested the need to figure out how that could slip through the cracks.

In reviewing this situation, Pierce County confirmed that the Contractor has been meeting the contract requirements and expectations in providing the necessary erosion control measures to the project site. As of May 31, 2012, Pierce County has reimbursed Contractor \$61,430 under Bid Items No. 55 through 59. Consequently, the project site is stabilized. However, as of this date, Contractor has not submitted any ESC Lead reports as required by the contract for the subject project.

Thus, on May 31, 2012 Pierce County informed the Contractor as follows:

"Your unit bid price for Bid Item No 52 is only \$10 for each day that you submit an ESC Lead report. Consequently, you may not recognize the importance of providing the Erosion and Sediment Control (ESC) Lead duties as required by Section 8-01.3(1)B of the Standard Specifications.

"The NPDES permit for the Wollochet project requires that erosion control measures be implemented and that the Inspection Forms be submitted and a copy kept on site.

"Section 1-09.9 of the Standard Specifications states the following:

"Failure to perform any of the obligations under the Contract by the Contractor may be decreed by the Contracting Agency to be adequate reason for withholding payments until compliance is achieved."

"The reports shall be completed for each inspection and they are required by the contract and they are to be submitted the next working day after the inspection.

"There will be no benefit in generating the past reports from your records. However, effective immediately it is critical that [Contractor] remain current by complementing the erosion control measures that are being provided in the field with the associated necessary reports.

"Please accept this as notice that I have notified the Construction Engineering Section that if the requirements of Section 8-01 of the Standard Specifications are not being adhered to, then they are to withhold payment until compliance is achieved."

Pierce County will withhold payment of the unit bid price (i.e., the amount that they bid to do this work in the contract) if they are not submitted within 24 hours from the time of the contractor's ESC Lead's inspection. The County is current in the timely submittal of the monthly required discharge monitoring reports (DMRs) to the Department of Ecology.

C. Site-specific Enhancements for Stormwater Pollution Prevention Plans (SWPPPs) at County Facilities

It its review of example SWPPPs and over the course of its field investigations, the Audit Team acknowledged that while comprehensive, SWPPPs could be improved by making them more site-specific.

By December 31, 2012, Pierce County will review all 13 existing SWPPPs covering 16 facilities to ensure site-specific maps/diagrams are included locating activities/materials needed maintenance and source control actions. The review and update and appropriate will be conducted in conjunction with a SWPPP training program, as described below.

D. SWPPP Training for County Staff

During its review of example SWPPPs and over the course of its field investigations, the Audit Team acknowledged that SWPPP implementation could improve with site-specific SWPPP training for staff at facilities with those SWPPPs.

In June 2012, Pierce County began implementation of a SWPPP training program for facilities covered by a SWPPP. Initial priority for SWPPP update and training will be as follows (in priority order):

- Remann Hall, CCB/Jail, Annex/LESA Complex (Facilities Management Department) (completed)
- Anderson Island, Key Center, Prairie Ridge Transfer Stations (Solid Waste Services)
- Heritage, Sprinker, Spanaway Lake Park (Parks and Recreation)
- North County, East County, Mid County, Central Maintenance (Road Operations)

E. Expanded and Enhanced NPDES Stormwater Training

In reviewing training records and during discussions at the Audit, the Audit Team noted gaps in records, in addition to additional training needs cited above. Pierce County was noted as being currently involved in change over to a new centralized training record system.

By July 1, 2012, Pierce County will deploy its new centralized staff training system. That system will keep records of all training events by all 3,000 Pierce County employees, including converting historic records from the County's existing *Train* database. The new system will have capability of identify all NPDES Stormwater Permit required trainings.

In addition, in June 2012, Pierce County established a centralized NPDES Stormwater Permit Training Coordinator in Surface Water Management Division. The NPDES Stormwater Training Coordinator will be responsible for the development, delivery, evaluation, tracking and reporting of all County NPDES stormwater Permit related training for County staff, tenants of County facilities, and others. The initial priorities of the Training Coordinator will be Stormwater Pollution Prevention Plan training and ensuring accurate and updated records of all County NPDES stormwater Permit-required training.

F. Formalizing High Risk Sites for Sedimentation and Erosion Potential

At the Audit, the Audit Team had questions concerning the process the County uses to determine sites with high risk potential for erosion and sediment control. After discussion, presentation of County written procedures, and GIS demonstration, the Audit Team expressed assurance with the method.

However, to further assure the Audit Team, Pierce County Planning and Land Services Department has formalized as policy its alternative method for determine high erosion risk potential, as presented during the Audit. A copy of that policy is in Attachment Two.

G. Expedited and Flexible Updates to Site Development Manual

During the Audit, the Audit Team noted that given that the Site Development Manual is adopted in its entirety as County Code by the County Council, a great deal of effort and time is required to make any changes to it, even if they are only minor or even only typographical errors. Pierce County also acknowledged that changes to the Manual could result in the need to reapply to Department of Ecology for that agency to make an "equivalency determination" and potentially result in the need for another major modification to the Phase I General Permit. The Audit Team encouraged the County to look for ways for making the Site Development Manual effective through use of it through reference, rather than as an ordinance itself.

Pierce County has sought legal counsel from the Prosecuting Attorney's Office to provide guidance to Surface Water Management concerning options for enhancing modifications to the Site Development Manual while avoiding timely and costly process of ordinance amendments and avoiding the need to obtain additional equivalency determinations from the Washington Department of Ecology. At a minimum, we intend to relay this concern about the cost and time difficulties of code amendments to the County Council in an attempt to expedite changes when needed.

II. Executive Order

As a way of enhancing Pierce County's stormwater program beyond actions suggested by the Audit Team, Pierce County Executive Pat McCarthy has self-initiated Executive Order (EO) 2012-1, Concerning Stormwater Management. That Order was issued in June 2012 and applies to all Pierce County departments. It is included in this Quick Start Program Enhancement Plan as Attachment 3.

EO 2012-1 establishes accountability for stormwater Permit implementation, reaffirms the importance of oversight of County construction projects, and directs Surface Water Management to establish a formal centralized NPDES Stormwater Permit Training Coordinator.

CONTACT: Dan D. Wrye, Pierce County Water Quality Manager, SWM Division

(253) 798-4672, dwrye@co.pierce.wa.us

ATTACHMENT ONE

Updated Remann Hall Facilities Assessment and Status



Facilities Assessment - Facilities Management Printet 6/18/2012 2:37:25 PM

Ctrl-Enter = Save | F2 Key / Dtsl-Click = Lookup F5 Key = Refresh | Esc Key = Close Message Esc Key = Close Message

Location / Asset is Remann Hall Report Criteria

Type is equal to Punch List

Format 3 Data Reported Complete has a value Format 2 Target Date is within Next 6 Months Format 1 Target Date is within All To Date Format Criberia

tem Rating Compliance **Existing Condition Required Action** Procedure Target Date Complete Reported Reported Complete?

Facilities Management > Remann Hall **123**み box that has a mesh-acreen type lid (photo A and map entitled Terreson Half attached).) The 2011 recommended BidFe were Flow restrictor is inaccessible for Expose and raise elevation of inspection (see attached map manhole iid for access to inspect entitled 'Remann Half' for flow restrictor. Pacities Management Department Facilities). Solid waste is stored in a dropicilities Management Spartment Facilities). ivity (refer to 2011 NPDES ricitor was requeste er to 2011 NPDES ion). Access to the flow mance Assessment of mance Assessment of Operations and had for this storag d in 2011 the release or pos operational or structural be Implement BMP AA.4 -Storage of Solid Whetes and Food Whetes teched) or document offer resease of politients associated Source Control
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Five CBs have excessive sediment (locations shown on

Remove sediment from catch basins.

6 Month

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Soil contaminated by hydrustic fluid from vehicle leak (see photo 1109 and Work Order #15128 map attached).	A drum stored in the maintenance garage is rusted and is not labeled (see photos 1089-1100 and Work Order #15126 map attached).	Trash compactor leachate is on the pavement at the base of the trash compactor (see photos 1068-1070, photos 1075-1076, and Work Order #15128 map stanched).	Topeoff is stored in an uncovered pile on the pavement (see photo 1059, photo 1060, and Work Order #15126 map attached).	Paint containers do not have lids and are not covered (see photo 1058 and Work Order #15128 map attached).	Tree roots have obstructed portions of the storm drainage pipe that runs along the east parcel boundary (location shown on attached map entitled 'Remann Hall').	Hair).
Implement BMP A7.15 - Spills of Oil and Hazardous Substances (attached) or document other operational and structural best management practices to prevent and respond to spills or tests of oil or hazardous substances. Please review the attached template for creating a "Site Specific Spill Prevention Response Plan" and guidance document for the 'Dispose!	Implement BMP A4.7 - Storage of Liquid or Dangerous Wasta Containers (attached) or document other operational or structural best management practices that prevent the release of pollutants associated with chemical storage.	implement BMP A.4Storage of Solid Wastes and Food Wastes (attached) or document other operational or structural best management practices that prevent the release of pollutants when the tresh compactor leachate discharge pipe is disconnected from the sewer hock-up pipe.	Implement BMP A4.1 - Storage or Transfer of Solid Raw Meterials, Byproducts, or Finished Products (attached) or document other operational or shuctural best management practices that prevent the release of pollutants associated with topsoil storage.	Implement BMP A4.7 - Storage of Liquid or Dangerous Waste Containers (attached) or document other operational or sinuctural best management practices that prevent the release of pollutants associated with liquid waste storage.	Clear pipe of roots, inspect pipe, and replace pipe as necessary.	
Source Control Punchlist	Source Control Punchilist	Source Control Punchiist	Source Centrol Punchilist	Source Control Punchilist	2 Year Punchlist	
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16136 16136

Gesofine stored in a single-walled container that is located above a pervious surface (soit), with no secondary containment, no drip pens, and no absorbent materials located in the vicinity the secondary and Work Order w

of Petroleum Conteminated Soils'.

Implement BMP A4.7 -Storage of Liquid or Dangerous Waste Containers (attached) or document other operational or structural best management practices that prevent the release of polutents associated or with liquid materials storage.

Source Control By

5/18/2012

Sams

During the period May 28 through June 6th, Pierce County conducted a site-specific SWPPP Training at Remann Hall and completed or put into actions the following (the PC-numbers correspond to the deffiencies detailed in the facility assessment for Remann Hall):

PC-12374 – Project is scheduled for this year to install extended. Work has started.

PC-12376 – Purchase order has been issued to vendor to manufacture a solid lid for dumpster.

PC-14110 – CBs will be cleaned out by June 29, 2012.

PC-14112 - Project funded for repair this calendar year.

PC-15130 – Paint containers properly disposed of.

PC-15131 – Topsoil remains but is covered. The owner is the halfway house onsite and they are working to remove soil. It will remained covered until used or taken away.

PC-15132 – Leachate cleaned up. Hose for compactor is disconnected when taken to be emptied. BMP in place to use flexible dam and drop pan/absorbent pad when temporarily disconnected.

PC-15133 – Drum stored in maintenance garage will be properly disposed of by June 8, 2012.

PC-15134 – Soil will be properly disposed of by June 8, 2012.

PC-15135 - Drip pan and absorbent pad in place under the gas tank of the engine on the trailer.



2702 South 42nd Street, Suite 201 Tacoma, Washington 98409 Phone (253) 798-2725 Fax (253) 798-7709

Summary of NPDES Training Event

DATE:

June 7, 2012

TO:

Dan Wrye

FROM:

Rob Dudra

RE:

Facilities Management: Combined Staff of Remann Hall

and Annex/LESA Complex

Attendees

The Facilities Management Staff can be interchangeable for the above-mentioned Pierce County facilities. Additionally, the Supervisor is the same for both facilities. Therefore, this training event was presented to the combined staff. Also attending was a representative from Promise House, a contracted service provider.

Presenters

Rob Dudra, Water Quality Specialist, Pierce County Surfacewater Management (PC SWM) Corrie Smith, Water Quality Specialist, Pierce County Surfacewater Management

Training Program

The introduction outlined enhanced trainings for all Pierce County SWPPP facilities covered under Pierce County's General Phase 1 Municipal Stormwater Permit. (Rob Dudra)

The program was comprised of two separate trainings:

- 1. Spill Response (Rob Dudra)
- 2. Site Specific Review of Stormwater Pollution Prevention Plans (SWPPP) for Remann Hall and the Annex/LESA Complex
 - Review Function of SWPPP (Rob Dudra)
 - Review Best Management Practices (BMPs) for each facility (Corrie Smith, Rob Dudra)

1. Spill Response

a. narrative PC SWM PowerPoint presentation:

Preventing Polluted Runoff Safely: Fueling Spills at Dedicated Stations

Gas / Diesel / Motor Oil

b. demonstration/ discussion about Spill Response Kits and contents; responding to and reporting spill events; required locations of spill kits; refurbishment of spill kits.

- 2. <u>Site Specific Review of Stormwater Pollution Prevention Plans (SWPPP) for Remann Hall and the Annex/LESA Complex</u>
 - Review Function of SWPPP (Rob Dudra)
 - explanation of SWPPP and site-specific application
 - Review Best Management Practices (BMPs) for each facility (Corrie Smith, Rob Dudra)
 - explanation of Source Control Policy
 - explanation of BMPs and task applications

The training event was observed by John Collins, Water Quality Supervisor, Pierce County Surfacewater Management.

Training debriefing session: June 11, 2012 at 9:30 a.m.

Respectfully submitted,

Rob Dudra

Water Quality Specialist

Permit Management Unit

Pierce County Works & Utilities

Surface Water Management

Attachments:

- Agenda
- Employee Training Attendee Sign-In Sheet
- Pierce County SWPPP Facilities
- Spill Response PPT Presentation
- Remann Hall SWPPP TOC and BMPs
- Annex/LESA Complex SWPPP TOC and BMPs

Pierce County NPDES Training Agenda

Facilities: Remann Hall / Annex LESA Complex Combined Staff

Date: June 6, 2012

Time: 1:00-3:00 pm Location: Remann Hall

Presenters: Rob Dudra & Corrie Smith PC Surface Water Management

1:00- 1: 40 p.m. Spill Response

1:40 - 3:00 p.m. Site Specific Review of Stormwater **Pollution Plans for Remann Hall and Annex LESA Complex**

- Review Function of SWPPP
- Review Best Management Practices (BMPs) for **Each Facility**

See Attached Handouts

Date: 06/06/2012 Time: 1:40-3:00 pm
Title Date

Provide and complete this document for each training event.

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Provide and complete this document for each training event. Today's Date: Print Name Signature	Training Location: Remann Hall Topic(s): Site Specific SWPPP& BMP Review Time: 1:40-3:00 pm Presenter: Rob Dudra & Corrie Smith	Employee Training Attendee Sign-In Sheet Remann Hall /Annex LESA Complex
Facility Work Position	2	Worksheet #14A Provided By: Title: Date:

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Training Location: Remann Hall Topic(s): Spill Response Presenter: Rob Dudra Remann Hall /Annex LESA Complex **Employee Training Attendee Sign-In Sheet** Time: 1:00-1:40 pm Date: 06/06/2012 Provided By: Title: Date: Worksheet #14A

Provide and complete this document for each training event.

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Planning and Land Services Policy formalizing alternative process from determining high risk sites for erosion and sedimentation potential

Effective Date: June 28, 2010

Page: 1 of 2



POLICY

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Cancels:

See Also:

Approved by: Mitchell Brells, P.E.

DE POL – 4005 <u>Alternative Process for Determining Construction Site</u> <u>Sediment Damage Potential.</u>

Pierce County's Phase 1 Municipal Stormwater Permit, Section S5.C5.b.vi., requires inspection prior to clearing and construction for all permitted development sites that meet the thresholds in S5.C.5.b.i., and that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7.

Appendix 7- Determining Construction Site Sediment Damage Potential states:

Permittees may use the rating system or develop an alternative process designed to identify site-specific features which indicate the site must be inspected prior to clearing and construction. Any alternative evaluation process must be documented and provide for equivalent environmental review.

Alternative Process.

The Development Engineering Division has adopted the following alternative process for determining construction site sediment damage potential to address impacts to identified sediment/erosion sensitive features discussed in Appendix 7:

- 1). All projects which require an engineered abbreviated plan review process in accordance with the Pierce County Stormwater Management and Site Development Manual, Ordinance 2008-59s/Title 17A, Table 3.1, due to proposed development activity in or near the following areas shall require inspection prior to permit issuance:
 - Critical area (wetland, fish and wildlife, potential flood, landslide, erosion, mine or seismic hazard areas) or associated buffers/management areas as regulated under Development Regulations-Critical Areas Title 18E.
 - > Development activity within a drainage course or drainage channel.
 - > Projects which require special grading controls.
- 2). All projects which require a drainage control plan review process due to proposed development activity exceeding thresholds covered under Table 3.1.

Inspection Process:

3). Project permit applications meeting the above thresholds shall be routed to the Development Engineering Inspection Work Unit for preliminary inspection prior to permit issuance. Staff shall inspect the project site to assess potential sediment discharge impacts, and complete a standard inspection report form. All inspection documentation shall be provided to the review engineer and be used in the review process to establish necessary site mitigation to ensure protection of sediment/erosion sensitive features.

ATTACHMENT THREE

EXECUTIVE ORDER NO. 2012-1, Concerning Effective Stormwater Management Pierce County Washington



930 Tacoma Avenue South, Room 737 Tacoma, Washington 98402-2100 (253) 798-7477 • FAX (253) 798-6628 www.piercecountywa.org

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Deputy Executive
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EXECUTIVE ORDER NO. 2012-1, Concerning Effective Stormwater Management Pierce County Washington

This Order requires and empowers Pierce County Departments to fully implement all applicable provisions of the NPDES Phase I Municipal Stormwater Permit issued to Pierce County. It is the intent of this Order that Pierce County departments coordinate, implement, track, and report specific actions required by the Permit. It is further the intent of this Order that Pierce County exercises its role in reducing polluted runoff from County drainage system, facilities and properties to the maximum extent practicable to protect Pierce County's surface and ground water resources and to continue to be a leader for water quality in the Puget Sound Region.

WHEREAS, polluted runoff is the reason three-quarters of Pierce County's waterbodies are impaired; and

WHEREAS, waterbody impairment negatively affects beneficial uses of surface waters, including people, fish, shellfish, and wildlife, and hinder sustainable and livable communities; and

WHEREAS, effective control and reduction of polluted runoff is essential for ecological and economic health; and

WHEREAS, Pierce County has operated under a federal Clean Water Act, National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Stormwater Permit since 1995 which requires a program to reduce negative effects of polluted runoff; and

WHEREAS, Pierce County invests millions of dollars annually towards implementation of the NPDES Permit and implements other local programs aimed at improving water quality; and

WHEREAS, Pierce County intents to fully meet its NPDES Stormwater Permit responsibilities and immediately take actions to enhance its implementation as needed;

NOW THEREFORE, I, Pat McCarthy, Pierce County Executive, do hereby order and direct all Pierce County departments to implement the following to ensure Pierce County's full and continuing compliance with its municipal stormwater permit, to prevent or reduce polluted runoff from County drainage system, facilities, and properties, and to continue to be a leader for water quality in the Puget Sound Region:

1. Organization.

a. The Surface Water Management Division of Public Works and Utilities Department shall be County policy and administrative lead on the NPDES Stormwater Permit and shall also be responsible for tracking, reporting, and evaluating permit compliance as well as lead for monitoring, inspections, training, outreach, internal technical assistance, maintenance and development standards, and intra- and inter-jurisdictional coordination.

- b. Each affected department of the County that owns assets or conducts actions regulated under the Permit or whose activities or programs could support its water quality goals shall be responsible for understanding and fully implementing the requirements of the municipal stormwater Permit and for integrating compliance activities into departmental programs and plans.
- c. Each department engaging in any activity or program that may be subject to or could support the municipal stormwater Permit shall designate a municipal Permit lead who will assist Surface Water Management in analyzing the Permit for its applicability to the department's programs and activities.
- d. Each department having assets or activities regulated by the Permit shall fully comply will all applicable Permit requirements, including but not limited to site development, construction oversight, source control, record keeping, tracking and reporting, and staff training.
- e. Each department having assets or activities regulated by the Permit shall fully coordinate and respond to reports, records, policies and procedural inquires conducted by Surface Water Management in fulfilling its duties as County Permit lead.

2. Oversight of County Construction Projects.

- a. Every County department or division that conducts construction activities regulated under the NPDES Phase I Municipal Stormwater Permit or under the NPDES Construction Sites Permit shall continue to fully implement all applicable requirements for onsite Erosion and Sedimentation Control (ESC) lead designation and Stormwater Pollution Prevention Plan development, training, and onsite inspection and monitoring report requirements.
- b. Each County department or division that conducts construction activities regulated under the NPDES Phase I Municipal Stormwater Permit or under the NPDES Construction Sites Permit shall exercise provision 1-09.9 (page 1-94, WSDOT 2012 Standard Contract Specifications), or equivalent, to withhold payment in the event the contractor fails to fully meet terms of the NPDES Phase I Municipal Stormwater Permit or the NPDES Construction Sites Permit for the County's construction project.

3. Pollution Prevention and Source Control.

- a. Every County department or division that owns lands, structures or portions of the County's municipal separate stormwater sewer system shall implement pollution prevention and operational source control best management practices and if necessary, structural source control best management practices.
- 4. Designation of County NPDES Stormwater Permit Training Coordinator.
 - a. There is hereby designate a full time NPDES Stormwater Permit Training Coordinator in Surface Water Management Division. The duties of the Training Coordinator shall be to develop, deliver, evaluate, track, and report NPDES stormwater Permit related training for County staff, tenants of County facilities, and others as applicable.

- b. The initial priorities of the Training Coordinator shall be (i) training of County staff with responsibilities specified in Stormwater Pollution Prevention Plans at County facilities; and (ii) ensuring accurate and updated records of all County NPDES stormwater Permitrequired training.
- 4. This Executive Order supersedes EO 2008-01.

Effective Date: June 8, 2012

Pat McCarthy

Pierce County Executive